WHAT IS CLAIMED IS:

1. A compound of Formula IB:

wherein

R¹ is selected from hydrido, hydroxy, alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl, heterocyclyl, cycloalkylalkylene, cycloalkenylalkylene, heterocyclylalkylene, haloalkyl, haloalkenyl, haloalkynyl, hydroxyalkyl, hydroxyalkenyl,

- hydroxyalkynyl, aralkyl, aralkenyl, aralkynyl, arylheterocyclyl, carboxy, carboxyalkyl, alkoxyalkyl, alkenoxyalkyl, alkynoxyalkyl, aryloxyalkyl, alkoxyaryl, heterocyclyloxyalkyl, alkoxyalkoxy, mercaptoalkyl, alkylthioalkylene, alkenylthioalkylene,
- alkylthioalkenylene, amino, aminoalkyl, alkylamino, alkenylamino, alkynylamino, arylamino, heterocyclylamino, alkylsulfinyl, alkenylsulfinyl, alkynylsulfinyl, arylsulfinyl, heterocyclylsulfinyl, alkylsulfonyl, alkenylsulfonyl, alkynylsulfonyl, arylsulfonyl,
- heterocyclylsulfonyl, alkylaminoalkylene, alkylsulfonylalkylene, acyl, acyloxycarbonyl, alkoxycarbonylalkylene, aryloxycarbonylalkylene, heterocyclyloxycarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, heterocyclyloxycarbonylarylene,
- alkylcarbonylalkylene, arylcarbonylalkylene,
 heterocyclylcarbonylalkylene, alkylcarbonylarylene,
 arylcarbonylarylene, heterocyclylcarbonylarylene,
 alkylcarbonyloxyalkylene, arylcarbonyloxyalkylene,
 heterocyclylcarbonyloxyalkylene, alkylcarbonyloxyarylene,

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arylcarbonyloxyarylene, and heterocyclylcarbonyloxyarylene; or R¹ has the formula

$$\begin{array}{c|c}
R^{25} & O & R^{26} \\
C & C & C & N \\
H & R^{27}
\end{array}$$
(II)

wherein:

i is an integer from 0 to 9;

R²⁵ is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkylcarbonylalkylene, arylcarbonylalkylene, and heterocyclylcarbonylaminoalkylene; and

R²⁶ is selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkylalkylene, aralkyl, alkoxycarbonylalkylene, and alkylaminoalkyl; and

R²⁷ is selected from alkyl, cycloalkyl, alkynyl, aryl, heterocyclyl, aralkyl, cycloalkylalkylene, cycloalkenylalkylene, cycloalkylarylene, cycloalkylcycloalkyl, heterocyclylalkylene, alkylarylene, alkylaralkyl, aralkylarylene, alkylheterocyclyl, alkylheterocyclylalkylene, alkylheterocyclylarylene,

aralkylheterocyclyl, alkoxyalkylene, alkoxyarylene, alkoxyaralkyl, alkoxyheterocyclyl, alkoxyalkoxyarylene, aryloxyarylene, aralkoxyarylene, alkoxyheterocyclylalkylene, aryloxyalkoxyarylene, alkoxycarbonylalkylene, alkoxycarbonylheterocyclyl,

alkoxycarbonylheterocyclylcarbonylalkylene, aminoalkyl, alkylaminoalkylene, arylaminocarbonylalkylene, alkoxyarylaminocarbonylalkylene, aminocarbonylalkylene, arylaminocarbonylalkylene, alkylaminocarbonylalkylene, arylcarbonylalkylene, alkoxycarbonylarylene,

aryloxycarbonylarylene, alkylaryloxycarbonylarylene, arylcarbonylarylene, alkylarylcarbonylarylene, alkoxycarbonylheterocyclylarylene,

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alkoxycarbonylalkoxylarylene,
heterocyclylcarbonylalkylarylene, alkylthioalkylene,
cycloalkylthioalkylene, alkylthioarylene,
aralkylthioarylene, heterocyclylthioarylene,
arylthioalklylarylene, arylsulfonylaminoalkylene,
alkylsulfonylarylene, alkylaminosulfonylarylene; wherein
said alkyl, cycloalkyl, aryl, heterocyclyl, aralkyl,

heterocyclylalkylene, alkylheterocyclylarylene, alkoxyarylene, aryloxyarylene, arylaminocarbonylalkylene, aryloxycarbonylarylene, arylcarbonylarylene, alkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, and alkylsulfonylarylene groups may be optionally substituted with one or more radicals independently selected from alkyl, halo, haloalkyl,

alkoxy, keto, amino, nitro, and cyano; or

R²⁷ is -CHR²⁸R²⁹ wherein R²⁸ is alkoxycarbonyl, and R²⁹ is selected from aralkyl, aralkoxyalkylene, heterocyclylalkylene, alkylheterocyclylalkylene, alkoxycarbonylalkylene, alkylthioalkylene, and aralkylthioalkylene; wherein said aralkyl and heterocylcyl groups may be optionally substituted with one or more radicals independently selected from alkyl and nitro; or

 R^{26} and R^{27} together with the nitrogen atom to which they are attached form a heterocycle, wherein said heterocycle is optionally substituted with one or more radicals independently selected from alkyl, aryl,

- heterocyclyl, heterocyclylalkylene, alkylheterocyclylalkylene, aryloxyalkylene, alkoxyarylene, alkylaryloxyalkylene, alkylcarbonyl, alkoxycarbonyl, aralkoxycarbonyl, alkylamino and alkoxycarbonylamino; wherein said aryl,
- heterocyclylalkylene and aryloxyalkylene radicals may be optionally substituted with one or more radicals independently selected from halogen, alkyl and alkoxy; and

 ${\ensuremath{\mathbb{R}}}^2$ is piperidinyl substituted with one or more 100 substituents selected from hydroxyalkyl, hydroxyalkenyl, hydroxyalkynyl, alkoxyalkylene, alkoxyalkenylene, alkoxyalkynylene, and hydroxyacyl, wherein said hydroxyalkyl, hydroxyalkenyl, hydroxyalkynyl, alkoxyalkylene, alkoxyalkenylene, alkoxyalkynylene, and 105 hydroxyacyl substitutents may be optionally substituted with one or more substituents selected from cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl, wherein said cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl substituents may be 110 optionally substituted with one or more substituents selected from alkylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or 115 R² is piperidinyl substituted with one or more substituents selected from hydroxycycloalkyl and alkoxycycloalkyl, and wherein said hydroxycycloalkyl and alkoxycycloalkyl substitutents may be optionally substituted with one or more substituents selected from 120 cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl, wherein said cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl substituents may be optionally substituted with one or more substituents selected from alkylene, alkynylene, hydroxy, 125 halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; and

R³ is selected from pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylakyl, thiazolylamino,

wherein the R³ pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylalkyl, thiazolylamino,

groups may be optionally substituted with one or more substituents independently selected from hydrogen, aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy, wherein said aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy substituents may be optionally substituted with one or more alkylene, alkenylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; and

R4 is selected from hydrido, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein R4 is optionally substituted with one or more substituents independently selected from halo, haloalkyl, haloalkoxy, alkoxy, cyano, hydroxy, alkyl, alkenyl, and alkynyl, wherein said haloalkyl, haloalkoxy, alkoxy, cyano, hydroxy, alkyl, alkenyl, and alkynyl substituents may be optionally substituted with one or more alkylene, alkenylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or

a pharmaceutically-acceptable salt or tautomer

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thereof.

2. A compound of Claim 1'wherein:

alkoxyalkynylene, hydroxyalkylcarbonyl,

R² is piperidinyl substituted with one or more substituents selected from hydroxyalkyl, hydroxyalkenyl, hydroxyalkynyl, alkoxyalkylene, alkoxyalkenylene, alkoxyalkynylene, hydroxyalkylcarbonyl, hydroxyalkenylcarbonyl, and hydroxyalkynylcarbonyl, wherein said hydroxyalkyl, hydroxyalkenyl, hydroxyalkynyl, alkoxyalkylene, alkoxyalkenylene,

hydroxyalkenylcarbonyl, and hydroxyalkynylcarbonyl substitutents may be optionally substituted with one or more substituents selected from cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl, wherein said cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and

heteroarylalkyl substituents may be optionally substituted with one or more substituents selected from alkylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or

R² is piperidinyl substituted with one or more substituents selected from hydroxycycloalkyl, alkoxycycloalkyl, and hydroxycycloalkylcarbonyl, wherein said hydroxycycloalkyl, alkoxycycloalkyl, and hydroxycycloalkylcarbonyl substitutents may be optionally substituted with one or more substituents selected from cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl, wherein said cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl substituents may be optionally substituted with one or more substituents selected from alkylene, alkynylene, hydroxy,

substituents selected from alkylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy.

3. A compound of Claim 1' selected from compounds, their tautomers and their pharmaceutically acceptable salts, of the group consisting of:

4. A compound of Claim 1' having Formula XB:

wherein

Z represents a carbon atom or a nitrogen atom;

R¹ is selected from hydrido, hydroxy, alkyl,

5 cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl,
heterocyclyl, cycloalkylalkylene, cycloalkenylalkylene,
heterocyclylalkylene, haloalkyl, haloalkenyl,
haloalkynyl, hydroxyalkyl, hydroxyalkenyl,
hydroxyalkynyl, aralkyl, aralkenyl, aralkynyl,

10 arylheterocyclyl, carboxy, carboxyalkyl, alkoxyalkyl,

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alkenoxyalkyl, alkynoxyalkyl, aryloxyalkyl, alkoxyaryl, heterocyclyloxyalkyl, alkoxyalkoxy, mercaptoalkyl, alkylthioalkylene, alkenylthioalkylene, alkylthioalkenylene, amino, aminoalkyl, alkylamino, alkynylamino, arylamino, heterocyclylamino, alkylsulfinyl, alkenylsulfinyl, alkynylsulfinyl, arylsulfinyl, heterocyclylsulfinyl, alkylsulfonyl, alkenylsulfonyl, arylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heterocyclylsulfonyl, alkylaminoalkylene,

alkylsulfonylalkylene, acyl, acyloxycarbonyl, alkoxycarbonylalkylene, aryloxycarbonylalkylene, heterocyclyloxycarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, heterocyclyloxycarbonylarylene, alkylcarbonylalkylene, arylcarbonylalkylene,

heterocyclylcarbonylalkylene, alkylcarbonylarylene, arylcarbonylarylene, heterocyclylcarbonylarylene, alkylcarbonyloxyalkylene, arylcarbonyloxyalkylene, heterocyclylcarbonyloxyalkylene, alkylcarbonyloxyarylene, arylcarbonyloxyarylene, and

30 heterocyclylcarbonyloxyarylene; and

R² is piperidinyl substituted with one or more substituents selected from hydroxyalkyl, hydroxyalkenyl, alkoxyalkylene, alkoxyalkenylene, hydroxyalkylcarbonyl, and hydroxyalkenylcarbonyl, wherein said hydroxyalkyl, hydroxyalkenyl, alkoxyalkylene, alkoxyalkenylene, hydroxyalkylcarbonyl, and hydroxyalkenylcarbonyl

hydroxyalkylcarbonyl, and hydroxyalkenylcarbonyl substitutents may be optionally substituted with one or more substituents selected from cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl, wherein said

40 cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl substituents may be optionally substituted with one or more substituents selected from alkylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl,

alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or

R² is piperidinyl substituted with one or more substituents selected from hydroxycycloalkyl and hydroxycycloalkylcarbonyl, wherein said hydroxycycloalkyl and hydroxycycloalkylcarbonyl substitutents may be optionally substituted with one or more substituents selected from cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl, wherein said cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl substituents may be optionally substituted with one or more substituents selected from alkylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; and

R⁴ is selected from cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein R⁴ is optionally substituted with one or more substituents independently selected from halo, haloalkyl, haloalkoxy, alkoxy, cyano, hydroxy, alkyl, alkenyl, and alkynyl, wherein said haloalkyl, haloalkoxy, alkoxy, hydroxy, alkyl, alkenyl, and alkynyl substituents may be optionally substituted with one or more alkylene, alkenylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; and

R⁵ represents one or more substituents independently selected from hydrogen, aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy, wherein said aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy substituents may be optionally substituted with one or more alkylene, alkenylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or

a pharmaceutically-acceptable salt or tautomer

thereof.

- 5. A compound of Claim 4 wherein R^2 is piperidinyl substituted with at least one substituent attached to the distal nitrogen heteroatom or to a carbon ring atom adjacent to the distal nitrogen heteroatom of the piperidine ring.
- 6. A compound of Claim 4 wherein Z represents a carbon atom.
- 7. A compound of Claim 4 wherein Z represents a nitrogen atom.
- 8. A compound of Claim 4 wherein R¹ is selected from hydrido, alkyl, hydroxyalkyl and alkynyl.
 - 9. A compound of Claim 4 wherein \mathbb{R}^1 is hydrido.
- 10. A compound of Claim 4 wherein R² is piperidinyl substituted with at least one substituent selected from lower hydroxyalkyl, lower hydroxyalkylcarbonyl and hydroxycycloalkylcarbonyl.
- 11. A compound of Claim 4 wherein R4 is optionally substituted phenyl.
- 12. A compound of Claim 4 wherein R⁴ is phenyl optionally substituted at a substitutable position with one or more radicals independently selected from chloro, fluoro, bromo and iodo.
- 13. A compound of Claim 4 wherein \mathbb{R}^4 is phenyl optionally substituted at the meta or para position with one or more chloro radicals.

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- 14. A compound of Claim 4'wherein R⁵ is hydrido.
- 15. A compound of Claim 1-having Formula XX:

wherein:

Z represents a carbon atom or a nitrogen atom; ${\rm R}^{\rm 400}$ is selected from hydroxyalkyl,

hydroxyalkylcarbonyl and alkoxyalkylene, wherein said hydroxyalkyl, hydroxyalkylcarbonyl and alkoxyalkylene may be optionally substituted with one or more substituents selected from cycloalkyl, alkyl, aryl, arylalkyl,

- haloalkyl, and heteroarylalkyl, wherein said cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl substituents may be optionally substituted with one or more substituents selected from alkylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio.
 - cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or

 R^{400} is hydroxycycloalkylcarbonyl that is optionally substituted with one or more substituents selected from cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and

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heteroarylalkyl, wherein said cycloalkyl, alkyl, aryl, arylalkyl, haloalkyl, and heteroarylalkyl substituents may be optionally substituted with one or more substituents selected from alkylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; and

R^{401a} and R^{401b} are independently selected from hydrogen, halo, haloalkyl, haloalkoxy, alkoxy, cyano, hydroxy, alkyl, alkenyl, and alkynyl, wherein said haloalkyl, haloalkoxy, alkoxy, hydroxy, alkyl, alkenyl, and alkynyl substituents may be optionally substituted with one or more alkylene, alkenylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; and

R⁴⁰² is selected from hydrogen, aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy, wherein said aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy substituents may be optionally substituted with one or more alkylene, alkenylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or

a pharmaceutically-acceptable salt or tautomer thereof.

16. A compound of Claim 15 wherein:

R⁴⁰⁰ is selected from lower hydroxyalkyl, lower hydroxyalkylcarbonyl and lower alkoxyalkylene, wherein said lower hydroxyalkyl, lower hydroxyalkylcarbonyl and lower alkoxyalkylene may be optionally substituted with one or more substituents selected from cycloalkyl, lower alkyl, phenyl, lower phenylalkyl, lower haloalkyl, and

lower heteroarylalkyl, wherein said cycloalkyl, lower alkyl, phenyl, lower phenylalkyl, lower haloalkyl, and lower heteroarylalkyl substituents may be optionally substituted with one or more substituents selected from lower alkylene, lower alkynylene, hydroxy, halo, lower haloalkyl, lower alkoxy, keto, amino, nitro, cyano, lower alkylsulfonyl, lower alkylsulfinyl, lower alkylthio, lower alkoxyalkyl, phenyloxy, heterocyclyl, and lower heteroaralkoxy; or

R⁴⁰⁰ is hydroxycycloalkylcarbonyl that is optionally substituted with one or more substituents selected from cycloalkyl, lower alkyl, phenyl, lower phenylalkyl, lower haloalkyl, and lower heteroarylalkyl, wherein said cycloalkyl, lower alkyl, phenyl, lower phenylalkyl, lower haloalkyl, and lower heteroarylalkyl substituents may be optionally substituted with one or more substituents selected from lower alkylene, lower alkynylene, hydroxy, halo, lower haloalkyl, lower alkoxy, keto, amino, nitro, cyano, lower alkylsulfonyl, lower alkylsulfinyl, lower alkylthio, lower alkoxyalkyl, aryloxy, heterocyclyl, and lower heteroaralkoxy; and

R^{401a} and R^{401b} are independently selected from hydrogen, halo, lower haloalkyl, lower haloalkoxy, lower alkoxy, cyano, hydroxy, lower alkyl, lower alkenyl, and lower alkynyl, wherein said lower haloalkyl, lower haloalkoxy, lower alkoxy, cyano, hydroxy, lower alkyl, lower alkenyl, and lower alkynyl substituents may be optionally substituted with one or more lower alkylene, lower alkenylene, lower alkynylene, hydroxy, halo, lower haloalkyl, lower alkoxy, keto, amino, nitro, cyano, lower alkylsulfonyl, lower alkylsulfinyl, lower alkylthio, lower alkoxyalkyl, phenyloxy, heterocyclyl, and lower heteroaralkoxy; and

40 R⁴⁰² is selected from hydrogen, phenyl, lower alkylamino, lower alkylthio, lower alkyloxy, phenyloxy, phenylamino, phenylthio, and phenylalkoxy, wherein said

phenyl, lower alkylamino, lower alkylthio, lower alkyloxy, phenyloxy, phenylamino, phenylthio, and

45 phenylalkoxy may be optionally substituted with one or more lower alkylene, lower alkenylene, hydroxy, halo, lower haloalkyl, lower alkoxy, keto, amino, nitro, cyano, lower alkylsulfonyl, lower alkylsulfinyl, lower alkylthio, lower alkoxyalkyl, phenyloxy, heterocyclyl, and lower heteroaralkoxy; or

a pharmaceutically-acceptable salt or tautomer thereof.

- 17. A compound of Claim 15 wherein Z represents a carbon atom.
- $18.\ \ A$ compound of Claim 15 wherein Z represents a nitrogen atom.
- 19. A compound of Claim 15 wherein R^{400} is optionally substituted hydroxyalkylcarbonyl.
- 20. A compound of Claim 15 wherein R^{400} is optionally substituted hydroxycycloalkylcarbonyl.
- 21. A compound of Claim 15 wherein R^{400} is optionally substituted alkoxyalkylene.
- 22. A compound of Claim 15 wherein R^{400} is optionally substituted hydroxyalkyl.
- $23.\,$ A compound of Claim 15 wherein R^{401} represents one or more chloro, fluoro, bromo and iodo.
- $24\,.$ A compound of Claim 15 wherein R^{401} is metachloro or para-chloro.
 - 25. A compound of Claim 15 wherein R^{402} is hydrido.

and

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and

26. A compound of Claim 15 wherein:

 \mathbb{R}^{400} is optionally substituted lower hydroxyalkylcarbonyl;

 R^{401a} is selected from chloro, fluoro, bromo and iodo;

R402 is hydrido.

27. A compound of Claim 15 wherein:

R⁴⁰⁰ is selected from optionally substituted 2-hydroxyacetyl, 2-hydroxy-proprionyl, 2-hydroxy-2-methylpropionyl, 2-hydroxy-2-phenylacetyl, 3-

5 hydroxyproprionyl, 2-hydroxy-3-methylbutyryl, 2hydroxyisocapropyl, 2-hydroxy-3-phenylproprionyl, and 2hydroxy-3-imidazolylproprionyl;

 ${\rm R}^{\rm 401a}$ is selected from chloro, fluoro, bromo and iodo; and

 R^{402} is hydrido.

- $28.\ \ A$ compound of Claim 27 wherein R^{401a} is metachloro or para-chloro.
- 29. A compound of Claim 27 wherein R^{401a} is parachloro and R^{401b} is hydrogen.
 - 30. A compound of Claim 15 wherein:

 R^{400} is optionally substituted lower hydroxycycloalkylcarbonyl;

 R^{401a} is selected from chloro, fluoro, bromo and iodo;

R⁴⁰² is hydrido.

- 31. A compound of Claim 15 wherein:
- R^{400} is selected from optionally substituted 1-hydroxy-1-cyclohexylacetyl, 2-hydroxy-1-cyclohexylacetyl, 3-hydroxy-1-cyclohexylacetyl, 4-hydroxy-1-
- 5 cyclohexylacetyl, 1-hydroxy-1-cyclopentylacetyl, 2-

hydroxy-1-cyclopentylacetyl, and 3-hydroxy-1-cyclopentylacetyl, 2-hydroxy-2-cyclohexylacetyl;

 ${\rm R}^{\rm 401a}$ is selected from chloro, fluoro, bromo and iodo; and

10 R^{402} is hydrido.

- 32. A compound of Claim 31 wherein R^{401a} is metachloro or para-chloro.
 - 33. A compound of Claim 15 wherein: R^{400} is optionally substituted lower hydroxyalkyl; R^{401} is selected from chloro, fluoro, bromo and iodo;

 R^{402} is hydrido.

and

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34. A compound of Claim 15 wherein: \mathbb{R}^{400} is selected from optionally substituted hydroxymethyl, hydroxyethyl, hydroxypropyl and hydroxyisopropyl;

 \mathbb{R}^{401a} is selected from chloro, fluoro, bromo and iodo; and

R402 is hydrido.

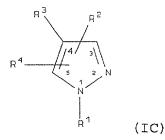
- $..35.~\rm{A}$ compound of Claim $34^{\rm{f}} \, \rm{wherein} \, \, \rm{R}^{\rm{401a}}$ is metachloro or para-chloro.
- 36. A compound of Claim 15 wherein: $R^{400} \mbox{ is optionally substituted lower alkoxyalkylene;} \\ R^{401a} \mbox{ is selected from chloro, fluoro, bromo and iodo;} \\ \mbox{and}$
- 5 R^{402} is hydrido.
 - 37. A compound of Claim 15 wherein: R^{400} is selected from optionally substituted methoxymethylene, methoxyethylene, methoxypropylene, methoxyisopropylene, ethoxymethylene, ethoxyethylene,

5 ethoxypropylene, and ethoxyisopropylene.

 ${\rm R}^{\rm 401a}$ is selected from chloro, fluoro, bromo and iodo; and

R402 is hydrido.

- 38. A compound of Claim 37' wherein \mathbb{R}^{401a} is metachloro or para-chloro.
 - (39) A compound of Formula IC:



5 wherein

R¹ is selected from hydrido, hydroxy, alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl, heterocyclyl, cycloalkylalkylene, cycloalkenylalkylene, heterocyclylalkylene, haloalkyl, haloalkenyl,

- haloalkynyl, hydroxyalkyl, hydroxyalkenyl, hydroxyalkynyl, aralkyl, aralkenyl, aralkynyl, arylheterocyclyl, carboxy, carboxyalkyl, alkoxyalkyl, alkenoxyalkyl, alkynoxyalkyl, aryloxyalkyl, alkoxyaryl, heterocyclyloxyalkyl, alkoxyalkoxy, mercaptoalkyl,
- alkylthioalkylene, alkenylthioalkylene, alkylthioalkylene, amino, aminoalkyl, alkylamino, alkenylamino, alkynylamino, arylamino, heterocyclylamino, alkylsulfinyl, alkenylsulfinyl, alkynylsulfinyl, arylsulfinyl, heterocyclylsulfinyl, alkylsulfonyl,
- alkenylsulfonyl, alkynylsulfonyl, arylsulfonyl, heterocyclylsulfonyl, alkylaminoalkylene, alkylsulfonylalkylene, acyl, acyloxycarbonyl, alkoxycarbonylalkylene, aryloxycarbonylalkylene,

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heterocyclyloxycarbonylalkylene, alkoxycarbonylarylene,
aryloxycarbonylarylene, heterocyclyloxycarbonylarylene,
alkylcarbonylalkylene, arylcarbonylalkylene,
heterocyclylcarbonylalkylene, alkylcarbonylarylene,
arylcarbonylarylene, heterocyclylcarbonylarylene,
alkylcarbonyloxyalkylene, arylcarbonyloxyalkylene,
heterocyclylcarbonyloxyalkylene, alkylcarbonyloxyarylene,
arylcarbonyloxyarylene, and
heterocyclylcarbonyloxyarylene; or

R1 has the formula

$$-\frac{C}{C} - (CH_2)_1 - C - \frac{N}{N_2}$$
(II)

wherein:

i is an integer from 0 to 9;

R²⁵ is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkylcarbonylalkylene, arylcarbonylalkylene, and heterocyclylcarbonylaminoalkylene; and

 R^{26} is selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkylalkylene, aralkyl, alkoxycarbonylalkylene, and alkylaminoalkyl; and

R²⁷ is selected from alkyl, cycloalkyl, alkynyl, aryl, heterocyclyl, aralkyl, cycloalkylalkylene, cycloalkenylalkylene, cycloalkylarylene, cycloalkylcycloalkyl, heterocyclylalkylene, alkylarylene, alkylaralkyl, aralkylarylene, alkylheterocyclyl,

alkylheterocyclylalkylene, alkylheterocyclylarylene, aralkylheterocyclyl, alkoxyalkylene, alkoxyarylene, alkoxyaralkyl, alkoxyheterocyclyl, alkoxyalkoxyarylene, aryloxyarylene, aralkoxyarylene, alkoxyheterocyclylalkylene, aryloxyalkoxyarylene,

alkoxycarbonylalkylene, alkoxycarbonylheterocyclyl, alkoxycarbonylheterocyclylcarbonylalkylene, aminoalkyl,

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alkylaminoalkylene, arylaminocarbonylalkylene, alkoxyarylaminocarbonylalkylene, aminocarbonylalkylene, arylaminocarbonylalkylene, alkylaminocarbonylalkylene, arylcarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, alkylaryloxycarbonylarylene,

arylcarbonylarylene, alkylarylcarbonylarylene, alkoxycarbonylheterocyclylarylene,

alkoxycarbonylalkoxylarylene,

65 heterocyclylcarbonylalkylarylene, alkylthioalkylene, cycloalkylthioalkylene, alkylthioarylene, aralkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, arylsulfonylaminoalkylene, alkylsulfonylarylene, alkylaminosulfonylarylene; wherein said alkyl, cycloalkyl, aryl, heterocyclyl, aralkyl

said alkyl, cycloalkyl, aryl, heterocyclyl, aralkyl, heterocyclylalkylene, alkylheterocyclylarylene, alkoxyarylene, aryloxyarylene, aryloxyarylene, aryloxycarbonylarylene, aryloxycarbonylarylene, alkylthioarylene, heterocyclylthioarylene,

arylthioalklylarylene, and alkylsulfonylarylene groups may be optionally substituted with one or more radicals independently selected from alkyl, halo, haloalkyl, alkoxy, keto, amino, nitro, and cyano; or

R²⁷ is -CHR²⁸R²⁹ wherein R²⁸ is alkoxycarbonyl, and R²⁹ is selected from aralkyl, aralkoxyalkylene, heterocyclylalkylene, alkylheterocyclylalkylene, alkoxycarbonylalkylene, alkylthioalkylene, and aralkylthioalkylene; wherein said aralkyl and heterocylcyl groups may be optionally substituted with one or more radicals independently selected from alkyl and nitro; or

R²⁶ and R²⁷ together with the nitrogen atom to which they are attached form a heterocycle, wherein said heterocycle is optionally substituted with one or more radicals independently selected from alkyl, aryl, heterocyclyl, heterocyclylalkylene, alkylheterocyclylalkylene, aryloxyalkylene,

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alkoxyarylene, alkylaryloxyalkylene, alkylcarbonyl, alkoxycarbonyl, aralkoxycarbonyl, alkylamino and alkoxycarbonylamino; wherein said aryl, heterocyclylalkylene and aryloxyalkylene radicals may be optionally substituted with one or more radicals independently selected from halogen, alkyl and alkoxy; and

100 R² is cyclohexyl substituted with one or more substituents selected from optionally substituted hydroxyalkyl, alkylaminoalkylene and cycloalkylamino; and

R³ is selected from pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylalkyl, thiazolylamino,

$$\begin{bmatrix} 1 \\ N \\ S \end{bmatrix} ; and \begin{bmatrix} N \\ N \\ O \end{bmatrix}$$

wherein the R³ pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylakyl, thiazolylamino,

groups may be optionally substituted with one or more substituents independently selected from hydrogen, aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy, wherein said aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy substituents may be optionally substituted with one or more alkylene, alkenylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; and

R⁴ is selected from hydrido, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein
R⁴ is optionally substituted with one or more substituents independently selected from halo, haloalkyl, haloalkoxy, alkoxy, cyano, hydroxy, alkyl, alkenyl, and alkynyl, wherein said haloalkyl, haloalkoxy, alkoxy, cyano, hydroxy, alkyl, alkenyl, and alkynyl substituents may be optionally substituted with one or more alkylene, alkenylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or

a pharmaceutically-acceptable salt or tautomer thereof.

40. A compound of Claim 39 selected from compounds, their tautomers and their pharmaceutically acceptable salts, of the group consisting of :

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41. A compound of Claim 39 having Formula XC:

wherein

Z represents a carbon atom or a nitrogen atom; R^1 is selected from hydrido, hydroxy, alkyl,

- 5 cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl, heterocyclyl, cycloalkylalkylene, cycloalkenylalkylene, heterocyclylalkylene, haloalkyl, haloalkenyl, haloalkynyl, hydroxyalkyl, hydroxyalkenyl, hydroxyalkynyl, aralkyl, aralkenyl, aralkynyl,
- arylheterocyclyl, carboxy, carboxyalkyl, alkoxyalkyl, alkenoxyalkyl, alkynoxyalkyl, aryloxyalkyl, alkoxyaryl, heterocyclyloxyalkyl, alkoxyalkoxy, mercaptoalkyl, alkylthioalkylene, alkenylthioalkylene, alkylthioalkenylene, amino, aminoalkyl, alkylamino,
- 15 alkenylamino, alkynylamino, arylamino, heterocyclylamino,

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alkylsulfinyl, alkenylsulfinyl, alkynylsulfinyl, arylsulfinyl, heterocyclylsulfinyl, alkylsulfonyl, alkenylsulfonyl, alkynylsulfonyl, arylsulfonyl, heterocyclylsulfonyl, alkylaminoalkylene,

- alkylsulfonylalkylene, acyl, acyloxycarbonyl, alkoxycarbonylalkylene, aryloxycarbonylalkylene, heterocyclyloxycarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, heterocyclyloxycarbonylarylene, alkylcarbonylalkylene, arylcarbonylalkylene,
- heterocyclylcarbonylalkylene, alkylcarbonylarylene, arylcarbonylarylene, heterocyclylcarbonylarylene, alkylcarbonyloxyalkylene, arylcarbonyloxyalkylene, heterocyclylcarbonyloxyalkylene, alkylcarbonyloxyarylene, arylcarbonyloxyarylene, and
- 30 heterocyclylcarbonyloxyarylene; and

 ${\ensuremath{\mathbb{R}}}^2$ is cyclohexyl substituted with one or more substituents selected from optionally substituted hydroxyalkyl, alkylaminoalkylene and cycloalkylamino; and

R⁴ is selected from cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein R⁴ is optionally substituted with one or more substituents independently selected from halo, haloalkyl, haloalkoxy, alkoxy, cyano, hydroxy, alkyl, alkenyl, and alkynyl, wherein said haloalkyl, haloalkoxy, alkoxy, hydroxy, alkyl, alkenyl, and alkynyl substituents may be optionally substituted with one or more alkylene, alkenylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl,

aryloxy, heterocyclyl, and heteroaralkoxy; and

R⁵ represents one or more substituents independently selected from hydrogen, aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy, wherein said aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy substituents may be optionally substituted with one or more alkylene, alkenylene, hydroxy, halo, haloalkyl, alkoxy, keto,

amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or

a pharmaceutically-acceptable salt or tautomer thereof.

- 42. A compound of Claim 41 wherein R^2 is cyclohexyl substituted with at least one substituent attached to the 4-position carbon ring atom of the cyclohexyl ring.
- 43. A compound of Claim 41 wherein Z represents a carbon atom.
- 44. A compound of Claim 41 wherein Z represents a nitrogen atom.
- 45. A compound of Claim 41 wherein R^1 is selected from hydrido, alkyl, hydroxyalkyl and alkynyl.
 - 46. A compound of Claim 41 wherein R1 is hydrido.
- 47. A compound of Claim 41 wherein R^2 is cyclohexyl substituted with one or more substituents selected from optionally substituted lower hydroxyalkyl, lower alkylaminoalkylene and cycloalkylamino.
- 48. A compound of Claim 41 wherein \mathbb{R}^4 is optionally substituted phenyl.
- 49. A compound of Claim 41 wherein R^4 is phenyl optionally substituted at a substitutable position with one or more radicals independently selected from chloro, fluoro, bromo and iodo.
- 50. A compound of Claim 41 wherein R4 is phenyl optionally substituted at the meta or para position with

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one or more chloro radicals.

- 51. A compound of Claim 41 wherein R⁵ is hydrido.
- 52. A compound of Claim 41 having Formula XXIA:

wherein:

Z represents a carbon atom or a nitrogen atom; $\ensuremath{R^{403}}$ is selected from hydroxyalkyl,

alkylaminoalkylene and cycloalkylamino; and

R^{404a} and R^{404b} are independently selected from hydrogen, halo, haloalkyl, haloalkoxy, alkoxy, cyano, hydroxy, alkyl, alkenyl, and alkynyl, wherein said haloalkyl, haloalkoxy, alkoxy, hydroxy, alkyl, alkenyl, and alkynyl substituents may be optionally substituted with one or more alkylene, alkenylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; and

R⁴⁰⁵ is selected from hydrogen, aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy, wherein said aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy

substituents may be optionally substituted with one or more alkylene, alkenylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or

a pharmaceutically-acceptable salt or tautomer thereof.

53. A compound of Claim 52 wherein:

 ${\rm R}^{403}$ is selected from lower hydroxyalkyl, lower alkylaminoalkylene and cycloalkylamino; and

R^{404a} and R^{404b} are independently selected from hydrogen, halo, lower haloalkyl, lower haloalkoxy, lower alkoxy, cyano, hydroxy, lower alkyl, lower alkenyl, and lower alkynyl, wherein said lower haloalkyl, lower haloalkoxy, lower alkoxy, cyano, hydroxy, lower alkyl, lower alkenyl, and lower alkynyl substituents may be optionally substituted with one or more lower alkylene, lower alkenylene, lower alkynylene, hydroxy, halo, lower haloalkyl, lower alkoxy, keto, amino, nitro, cyano, lower alkylsulfonyl, lower alkylsulfinyl, lower alkylthio, lower alkoxyalkyl, phenyloxy, heterocyclyl, and lower heteroaralkoxy; and

15 R⁴⁰⁵ is selected from hydrogen, phenyl, lower alkylamino, lower alkylthio, lower alkyloxy, phenyloxy, phenylamino, phenylthio, and phenylalkoxy, wherein said phenyl, lower alkylamino, lower alkylthio, lower alkyloxy, phenyloxy, phenylamino, phenylthio, and phenylalkoxy may be optionally substituted with one or more lower alkylene, lower alkenylene, hydroxy, halo, lower haloalkyl, lower alkoxy, keto, amino, nitro, cyano, lower alkylsulfonyl, lower alkylsulfinyl, lower alkylsulfinyl, lower alkylthio, lower alkoxyalkyl, phenyloxy, heterocyclyl,

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- 54. A compound of Claim 52 wherein Z represents a carbon atom.
- 55. A compound of Claim 52 wherein Z represents a nitrogen atom.
- 56. A compound of Claim 52 wherein R^{403} is optionally substituted hydroxyalkyl.
- 57. A compound of Claim 52 wherein R^{403} is optionally substituted alkylaminoalkylene.
- 58. A compound of Claim 57 wherein \mathbb{R}^{403} is optionally substituted dialkylaminoalkylene.
- $59.\ A$ compound of Claim 52 wherein R^{403} is optionally substituted cycloalkylamino.
- 60. A compound of Claim 52 wherein R^{404a} is selected from chloro, fluoro, bromo and iodo.
- 61. A compound of Claim 52 wherein R^{404a} is metachloro or para-chloro.
 - 62. A compound of Claim 52 wherein \mathbb{R}^{405} is hydrido.
 - 63. A compound of Claim 52 wherein: R^{403} is optionally substituted lower hydroxyalkyl; R^{404a} is selected from chloro, fluoro, bromo and iodo;

 R^{405} is hydrido.

64. A compound of Claim 52 wherein: \mathbb{R}^{403} is selected from optionally substituted hydroxymethyl, hydroxyethyl, hydroxypropyl and hydroxybutyl;

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and

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and

 $\ensuremath{\mathsf{R}}^{404a}$ is selected from chloro, fluoro, bromo and iodo; and

R405 is hydrido.

- 65. A compound of Claim 64/wherein R^{404a} is metachloro or para-chloro.
- 66. A compound of Claim 52'wherein: R403 is optionally substituted lower alkylaminoalkylene;

 \mathbb{R}^{404a} is selected from chloro, fluoro, bromo and iodo; and

R405 is hydrido.

67. A compound of Claim 52 wherein:

R⁴⁰³ is selected from optionally substituted
methylaminomethylene, methylaminoethylene,
methylaminopropylene, ethylaminomethylene,
ethylaminoethylene, ethylaminopropylene,
propylaminomethylene, propylaminoethylene,
propylaminopropylene, dimethylaminomethylene,
dimethylaminoethylene, dimethylaminopropylene,
diethylaminomethylene, diethylaminoethylene,
diethylaminopropylene, dipropylaminomethylene,
dipropylaminoethylene, and dipropylaminopropylene;
R^{404a} is selected from chloro, fluoro, bromo and iodo;

R405 is hydrido.

- 68. A compound of Claim $\stackrel{\frown}{67}$ wherein R^{404a} is metachloro or para-chloro.
- 69. A compound of Claim 52 wherein: $R^{403} \text{ is optionally substituted cycloalkylamino;} \\ R^{404a} \text{ is selected from chloro, fluoro, bromo and iodo;} \\ \text{and} \\$

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5 R^{405} is hydrido.

70. A compound of Claim 52 wherein: $R^{403} \text{ is selected from optionally substituted}$ cyclopropyl, cyclobutyl, cyclopentyl and cyclohexyl; $R^{404a} \text{ is selected from chloro, fluoro, bromo and iodo;}$ and $R^{405} \text{ is hydrido.}$

71. A compound of Formula XXIB:

wherein:

Z represents a carbon atom or a nitrogen atom;

R⁴⁰³ is selected from alkylamino; and

R^{404a} and R^{404b} are independently selected from
hydrogen, halo, haloalkyl, haloalkoxy, alkoxy, cyano,
hydroxy, alkyl, alkenyl, and alkynyl, wherein said
haloalkyl, haloalkoxy, alkoxy, hydroxy, alkyl, alkenyl,
and alkynyl substituents may be optionally substituted
with one or more alkylene, alkenylene, alkynylene,
hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro,

+.15+ ±2 T₁? 5

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cyano, alkylsulfonyl, alkylsulfinyl, alkylthio,
alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy;
and

15 R⁴⁰⁵ is selected from hydrogen, aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy, wherein said aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy substituents may be optionally substituted with one or more alkylene, alkenylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or

a pharmaceutically-acceptable salt or tautomer thereof.

72. A compound of Claim 71 wherein:

R⁴⁰³ is selected from lower alkylamino; and
R^{404a} and R^{404b} are independently selected from
hydrogen, halo, lower haloalkyl, lower haloalkoxy, lower
alkoxy, cyano, hydroxy, lower alkyl, lower alkenyl, and
lower alkynyl, wherein said lower haloalkyl, lower
haloalkoxy, lower alkoxy, cyano, hydroxy, lower alkyl,
lower alkenyl, and lower alkynyl substituents may be
optionally substituted with one or more lower alkylene,
lower alkenylene, lower alkynylene, hydroxy, halo, lower
haloalkyl, lower alkoxy, keto, amino, nitro, cyano, lower
alkylsulfonyl, lower alkylsulfinyl, lower alkylthio,
lower alkoxyalkyl, phenyloxy, heterocyclyl, and lower
heteroaralkoxy; and

R⁴⁰⁵ is selected from hydrogen, phenyl, lower
alkylamino, lower alkylthio, lower alkyloxy, phenyloxy,
phenylamino, phenylthio, and phenylalkoxy, wherein said
phenyl, lower alkylamino, lower alkylthio, lower
alkyloxy, phenyloxy, phenylamino, phenylthio, and
phenylalkoxy may be optionally substituted with one or
more lower alkylene, lower alkenylene, hydroxy, halo,

lower haloalkyl, lower alkoxy, keto, amino, nitro, cyano, lower alkylsulfonyl, lower alkylsulfinyl, lower alkylthio, lower alkoxyalkyl, phenyloxy, heterocyclyl, and lower heteroaralkoxy; or

a pharmaceutically-acceptable salt or tautomer thereof.

- 73. A compound of Claim 71 wherein Z represents a carbon atom.
- 74. A compound of Claim 71^{\prime} wherein Z represents a nitrogen atom.
- 75. A compound of Claim 71' wherein R^{403} is optionally substituted dialkylamino.
- 76. A compound of Claim 71 wherein R^{404a} is selected from chloro, fluoro, bromo and iodo.
- 77. A compound of Claim 71 wherein R^{404a} is metachloro or para-chloro.
 - 78. A compound of Claim 71 wherein R^{405} is hydrido.
 - 79. A compound of Claim 71 wherein: $R^{403} \text{ is optionally substituted lower alkylamino;}$ $R^{404a} \text{ is selected from chloro, fluoro, bromo and iodo;}$

R⁴⁰⁵ is hydrido.

and

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80. A compound of Claim 71 wherein:

 ${\rm R}^{403}$ is selected from optionally substituted methylamino, ethylamino, n-propylamino, isopropylamino, n-butylamino, sec-butylamino, t-butylamino,

5 isobutylamino, dimethylamino, diethylamino, di-n-propylamino, di-isopropylamino, di-n-butylamino, di-sec-

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butylamino, di-t-butylamino, and di-isobutylamino; ${\tt R^{404a}} \ \hbox{is selected from chloro, fluoro, bromo and iodo;}$ and

10 R^{405} is hydrido.

81. A compound of Claim 80 wherein R^{404a} is metachloro or para-chloro.

82. A compound Formula XXII:

wherein:

Z represents a carbon atom or a nitrogen atom; R^{406} is alkynyl; and

R^{407a} and R^{407b} are independently selected from hydrogen, halo, haloalkyl, haloalkoxy, alkoxy, cyano, hydroxy, alkyl, alkenyl, and alkynyl, wherein said haloalkyl, haloalkoxy, alkoxy, hydroxy, alkyl, alkenyl, and alkynyl substituents may be optionally substituted with one or more alkylene, alkenylene, alkynylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; and

15 R⁴⁰⁸ is selected from hydrogen, aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio,

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aralkoxy, wherein said aryl, alkylamino, alkylthio, alkyloxy, aryloxy, arylamino, arylthio, aralkoxy substituents may be optionally substituted with one or more alkylene, alkenylene, hydroxy, halo, haloalkyl, alkoxy, keto, amino, nitro, cyano, alkylsulfonyl, alkylsulfinyl, alkylthio, alkoxyalkyl, aryloxy, heterocyclyl, and heteroaralkoxy; or

a pharmaceutically-acceptable salt or tautomer thereof.

83. A compound of Claim 82 wherein:

R⁴⁰⁶ is selected from lower alkynyl; and

R^{407a} and R^{407b} are independently selected from
hydrogen, halo, lower haloalkyl, lower haloalkoxy, lower
alkoxy, cyano, hydroxy, lower alkyl, lower alkenyl, and
lower alkynyl, wherein said lower haloalkyl, lower
haloalkoxy, lower alkoxy, cyano, hydroxy, lower alkyl,
lower alkenyl, and lower alkynyl substituents may be
optionally substituted with one or more lower alkylene,
lower alkenylene, lower alkynylene, hydroxy, halo, lower
haloalkyl, lower alkoxy, keto, amino, nitro, cyano, lower
alkylsulfonyl, lower alkylsulfinyl, lower alkylthio,
lower alkoxyalkyl, phenyloxy, heterocyclyl, and lower
heteroaralkoxy; and

R⁴⁰⁸ is selected from hydrogen, phenyl, lower alkylamino, lower alkylthio, lower alkyloxy, phenyloxy, phenylamino, phenylthio, and phenylalkoxy, wherein said phenyl, lower alkylamino, lower alkylthio, lower alkyloxy, phenyloxy, phenylamino, phenylthio, and phenylalkoxy may be optionally substituted with one or more lower alkylene, lower alkenylene, hydroxy, halo, lower haloalkyl, lower alkoxy, keto, amino, nitro, cyano, lower alkylsulfonyl, lower alkylsulfinyl, lower alkylthio, lower alkoxyalkyl, phenyloxy, heterocyclyl, and lower heteroaralkoxy; or

a pharmaceutically-acceptable salt or tautomer

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thereof.

- 84. A compound of Claim 82 wherein Z represents a carbon atom.
- 85. A compound of Claim 82 wherein Z represents a nitrogen atom.
- 86. A compound of Claim 82 wherein \mathbb{R}^{407a} is selected from chloro, fluoro, bromo and iodo.
- 87. A compound of Claim 82 wherein \mathbb{R}^{407a} is metachloro or para-chloro.
 - 88. A compound of Claim 82 wherein R408 is hydrido.
 - 89. A compound of Claim 82 wherein:

R⁴⁰⁶ is optionally substituted lower alkynyl;

 ${\rm R}^{\rm 407a}$ is selected from chloro, fluoro, bromo and iodo; and

R408 is hydrido.

90. A compound of Claim 82 wherein:

 ${\rm R}^{406}$ is selected from optionally substituted ethynyl, propynyl and butynyl;

 ${\rm R}^{\rm 407a}$ is selected from chloro, fluoro, bromo and iodo; and

R408 is hydrido.

- 91. A compound of Claim 82 wherein R^{406} is propargyl.
- 92. A compound of Claim 82 wherein ${\bf R}^{407a}$ is metachloro or para-chloro.
 - 93. A compound of Formula IA

wherein

R¹ is selected from hydrido, hydroxy, alkyl,
cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl,
heterocyclyl, cycloalkylalkylene, cycloalkenylalkylene,
heterocyclylalkylene, haloalkyl, haloalkenyl,
haloalkynyl, hydroxyalkyl, hydroxyalkenyl,
hydroxyalkynyl, aralkyl, aralkenyl, aralkynyl,

arylheterocyclyl, carboxy, carboxyalkyl, alkoxyalkyl, alkenoxyalkyl, alkynoxyalkyl, aryloxyalkyl, alkoxyaryl, heterocyclyloxyalkyl, alkoxyalkoxy, mercaptoalkyl, alkylthioalkylene, alkenylthioalkylene, alkylthioalkenylene, amino, aminoalkyl, alkylamino,

alkenylamino, alkynylamino, arylamino, heterocyclylamino, alkylsulfinyl, alkenylsulfinyl, alkynylsulfinyl, arylsulfinyl, heterocyclylsulfinyl, alkylsulfonyl, alkenylsulfonyl, alkynylsulfonyl, arylsulfonyl, heterocyclylsulfonyl, alkylaminoalkylene,

alkylsulfonylalkylene, acyl, acyloxycarbonyl, alkoxycarbonylalkylene, aryloxycarbonylalkylene, heterocyclyloxycarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, heterocyclyloxycarbonylarylene, alkylcarbonylalkylene, arylcarbonylalkylene,

heterocyclylcarbonylalkylene, alkylcarbonylarylene, arylcarbonylarylene, heterocyclylcarbonylarylene, alkylcarbonyloxyalkylene, arylcarbonyloxyalkylene, heterocyclylcarbonyloxyalkylene, alkylcarbonyloxyarylene, arylcarbonyloxyarylene, and

30 heterocyclylcarbonyloxyarylene; or R1 has the formula

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wherein:

i is an integer from 0 to 9;

R²⁵ is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkylcarbonylalkylene, arylcarbonylalkylene, and heterocyclylcarbonylaminoalkylene; and

R²⁶ is selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkylalkylene, aralkyl, alkoxycarbonylalkylene, and alkylaminoalkyl; and

R²⁷ is selected from alkyl, cycloalkyl, alkynyl, aryl, heterocyclyl, aralkyl, cycloalkylalkylene, cycloalkenylalkylene, cycloalkylarylene, cycloalkylcycloalkyl, heterocyclylalkylene, alkylarylene, alkylaralkyl, aralkylarylene, alkylheterocyclyl, alkylheterocyclylalkylene, alkylheterocyclylarylene, aralkylheterocyclyl, alkoxyalkylene, alkoxyarylene, alkoxyaralkyl, alkoxyheterocyclyl, alkoxyalkoxyarylene,

aryloxyarylene, aralkoxyarylene, alkoxyheterocyclylalkylene, aryloxyalkoxyarylene, alkoxycarbonylalkylene, alkoxycarbonylheterocyclyl, alkoxycarbonylheterocyclylcarbonylalkylene, aminoalkyl,

alkylaminoalkylene, arylaminocarbonylalkylene, alkoxyarylaminocarbonylalkylene, aminocarbonylalkylene, arylaminocarbonylalkylene, alkylaminocarbonylalkylene, arylcarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, alkylaryloxycarbonylarylene,

arylcarbonylarylene, alkylarylcarbonylarylene, alkoxycarbonylheterocyclylarylene, alkoxycarbonylalkoxylarylene, heterocyclylcarbonylalkylarylene, alkylthioalkylene, cycloalkylthioalkylene, alkylthioarylene,

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and

aralkylthioarylene, heterocyclylthioarylene,
arylthioalklylarylene, arylsulfonylaminoalkylene,
alkylsulfonylarylene, and alkylaminosulfonylarylene;
wherein said alkyl, cycloalkyl, aryl, heterocyclyl,
aralkyl, heterocyclylalkylene, alkylheterocyclylarylene,
alkoxyarylene, aryloxyarylene, arylaminocarbonylalkylene,
aryloxycarbonylarylene, arylcarbonylarylene,
alkylthioarylene, heterocyclylthioarylene,
arylthioalklylarylene, and alkylsulfonylarylene groups
may be optionally substituted with one or more radicals
independently selected from alkyl, halo, haloalkyl,
alkoxy, keto, amino, nitro, and cyano; or

R²⁷ is -CHR²⁸R²⁹ wherein R²⁸ is alkoxycarbonyl, and R²⁹ is selected from aralkyl, aralkoxyalkylene, heterocyclylalkylene, alkylheterocyclylalkylene, alkoxycarbonylalkylene, alkylthioalkylene, and aralkylthioalkylene; wherein said aralkyl and heterocylcyl groups may be optionally substituted with one or more radicals independently selected from alkyl and nitro; or

 $\rm R^{26}$ and $\rm R^{27}$ together with the nitrogen atom to which they are attached form a heterocycle, wherein said heterocycle is optionally substituted with one or more radicals independently selected from alkyl, aryl, heterocyclyl, heterocyclylalkylene,

alkylheterocyclylalkylene, aryloxyalkylene, alkoxyarylene, alkylaryloxyalkylene, alkylcarbonyl, alkoxycarbonyl, aralkoxycarbonyl, alkylamino and alkoxycarbonylamino; wherein said aryl, heterocyclylalkylene and aryloxyalkylene radicals may be optionally substituted with one or more radicals independently selected from halogen, alkyl and alkoxy;

R² is selected from mercapto, aryl(hydroxyalkyl)amino, N-alkyl-N-alkynyl-amino, aminocarbonylalkylene, alkylcarbonylaminoalkylene,

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aminoalkylcarbonylaminoalkylene,
       alkylaminoalkylcarbonylamino, aminoalkylthio,
       alkylaminocarbonylalkylthio,
       alkylaminoalkylaminocarbonylalkylthio, cyanoalkylthio,
105
       alkenylthio, alkynylthio, carboxyalkylthio,
       alkoxycarbonylalkylthio, alkylsulfinyl, alkylsulfonyl,
       alkoxyalkyl, alkoxyalkylthio, alkoxycarbonylalkylamino,
       alkoxycarbonylaminoalkylene, alkoxycarbonylaminoalkoxy,
       aralkythio, heterocyclylalkylthio, aminoalkoxy,
       cyanoalkoxy, carboxyalkoxy, aryloxy, aralkoxy,
110
       alkenyloxy, alkynyloxy, and heterocyclylalkyloxy; or
              R^2 is R^{200}-heterocyclyl-R^{201}, R^{200}-aryl-R^{201}, or R^{200}-
       cycloalkyl-R201 wherein:
              R<sup>200</sup> is selected from:
115
              -(CR^{202}R^{203})_{v}-;
              -C(0)-;
              -C(0) - (CH_2)_{v} - ;
              -C(O)-O-(CH<sub>2</sub>)<sub>v</sub>-;
              -(CH_2)_v-C(O)-;
120
              -O-(CH_2)_v-C(O)-;
              -NR^{202}-;
              -NR^{202} - (CH_2)_{v} - ;
              -(CH_2)_v-NR^{202}-;
              -(CH_2)_v-NR^{202}-(CH_2)_z-;
              -(CH_2)_v-C(O)-NR^{202}-(CH_2)_z-;
125
              -(CH_2)_v-NR^{202}-C(O)-(CH_2)_z-;
              -(CH_2)_v - NR^{202} - C(O) - NR^{203} - (CH_2)_z - ;
              -S(O)_{x}-(CR^{202}R^{203})_{y}-;
              -(CR^{202}R^{203})_{v}-S(O)_{x}-;
              -S(O)_{x}-(CR^{202}R^{203})_{y}-O-;
130
              -S(O)_{x}-(CR^{202}R^{203})_{y}-C(O)-;
              -O-(CH<sub>2</sub>)<sub>v</sub>-;
              - (CH<sub>2</sub>)<sub>v</sub>-O-;
              -S-; and
135
              -0-;
              or R<sup>200</sup> represents a bond;
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R²⁰¹ represents one or more radicals selected from the group consisting of hydroxy, hydroxyalkyl, cycloalkyl, hydroxyalkylcarbonyl, cycloalkylcarbonyl,

- arylcarbonyl, haloarylcarbonyl, alkoxyalkylene, alkoxyarylene, carboxyalkylcarbonyl, alkoxyalkylcarbonyl, heterocyclylalkylcarbonyl, alkylsulfonylalkylene, aminoalkyl, aralkylamino, alkylaminoalkylene, aminocarbonyl, alkylcarbonylamino,
- alkylcarbonylaminoalkylene, alkylaminoalkylcarbonyl, alkylaminoalkylcarbonylamino, aminoalkylcarbonylaminoalkyl, alkoxycarbonylamino, alkoxyalkylcarbonylamino, alkoxycarbonylaminoalkylene, alkylimidocarbonyl, amidino, alkylamidino,

aralkylamidino, guanidino, guanidinoalkylene, and alkylsulfonylamino; and

 ${\ensuremath{R^{202}}}$ and ${\ensuremath{R^{203}}}$ are independently selected from hydrido, alkyl, aryl and aralkyl; and

y and z are independently 0, 1, 2, 3, 4, 5 or 6 wherein y + z is less than or equal to 6; and

x is 0, 1 or 2; or

 \mbox{R}^2 is $-\mbox{NHCR}^{204}\mbox{R}^{205}$ wherein \mbox{R}^{204} is alkylaminoalkylene, and \mbox{R}^{205} is aryl; or

 R^2 is $-C(NR^{206})R^{207}$ wherein R^{206} is selected from hydrogen and hydroxy, and R^{207} is selected from alkyl, aryl and aralkyl; and

R³ is selected from pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylakyl, thiazolylamino,

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wherein the R³ pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylalkyl, thiazolylamino,

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groups may be optionally substituted with one or more radicals independently selected from halo, keto, alkyl, aralkyl, aralkenyl, arylheterocyclyl, carboxy,

carboxyalkyl, alkoxy, aryloxy, alkylthio, arylthio, alkylsulfinyl, arylsulfinyl, alkylsulfonyl, arylsulfonyl, aralkoxy, heterocyclylalkoxy, amino, alkylamino, alkenylamino, alkynylamino, cycloalkylamino, cycloalkenylamino, arylamino, haloarylamino,

heterocyclylamino, aminocarbonyl, cyano, hydroxy, hydroxyalkyl, alkoxyalkylene, alkenoxyalkylene, aryloxyalkyl, alkoxyalkylamino, alkylaminoalkoxy, alkoxycarbonyl, aryloxycarbonyl, heterocyclyloxycarbonyl, alkoxycarbonylamino, alkoxyarylamino, alkoxyaralkylamino,

aminosulfinyl, aminosulfonyl, alkylsulfonylamino, alkylaminoalkylamino, hydroxyalkylamino, aralkylamino, aryl(hydroxyalkyl)amino, alkylaminoalkylaminoalkylamino, alkylheterocyclylamino, heterocyclylalkylamino, alkylheterocyclylalkylamino, aralkylheterocyclylamino,

heterocyclylheterocyclylalkylamino,
 alkoxycarbonylheterocyclylamino, nitro,
 alkylaminocarbonyl, alkylcarbonylamino,
 haloalkylsulfonyl, aminoalkyl, haloalkyl, alkylcarbonyl,
 hydrazinyl, alkylhydrazinyl, arylhydrazinyl, and -NR⁴⁴R⁴⁵
wherein R⁴⁴ is alkylcarbonyl or amino, and R⁴⁵ is alkyl or
 aralkyl; and

R⁴ is selected from hydrido, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein R⁴ is optionally substituted with one or more radicals independently selected from halo, alkyl, alkenyl, alkynyl, aryl, heterocyclyl, alkylthio, arylthio, alkylthioalkylene, arylthioalkylene, alkylsulfinyl,

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alkylsulfinylalkylene, arylsulfinylalkylene, alkylsulfonyl, alkylsulfonylalkylene,

arylsulfonylalkylene, alkoxy, aryloxy, aralkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, alkoxycarbonyl, aryloxycarbonyl, haloalkyl, amino, cyano, nitro, alkylamino, arylamino, alkylaminoalkylene, arylaminoalkylene, aminoalkylamino, and hydroxy;

provided R^3 is not 2-pyridinyl when R^4 is a phenyl ring containing a 2-hydroxy substituent and when R^1 is hydrido; and

further provided R^2 is selected from $-R^{200}$ -heterocyclyl- R^{201} , $-R^{200}$ -aryl- R^{201} , or $-R^{200}$ -unsubstituted cycloalkyl- R^{201} when R^4 is hydrido; and

further provided that R^4 is not methylsulfonylphenyl or aminosulfonylphenyl; and

further provided that \mathbb{R}^1 is not methylsulfonylphenyl; or

a pharmaceutically-acceptable salt or tautomer thereof.

94. A compound of Formula IXA:

wherein

Z represents a carbon atom or a nitrogen atom; and R^1 is selected from hydrido, lower alkyl, lower

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hydroxyalkyl, lower alkynyl, lower aralkyl, lower
      aminoalkyl and lower alkylaminoalkyl; and
            R<sup>2</sup> is lower hydroxyalkylamino; or
            \mbox{R}^2 is \mbox{R}^{200}\mbox{-heterocyclyl-R}^{201} or \mbox{R}^{200}\mbox{-cycloalkyl-R}^{201}
10
      wherein:
            R<sup>200</sup> is selected from:
            -(CR^{202}R^{203})_{v-};
            -NR^{202}-;
            -NR^{202}-(CH_2)_{y}-;
15
            -(CH_2)_v - NR^{202} -;
            -O-(CH<sub>2</sub>)<sub>v</sub>-;
            - (CH<sub>2</sub>)<sub>v</sub>-O-;
            -S-;
            -0-;
20
            or R<sup>200</sup> represents a bond;
            R^{201} represents one or more radicals selected from
      the group consisting of hydroxy, lower hydroxyalkyl,
      lower cycloalkyl; lower hydroxyalkylcarbonyl, lower
      cycloalkylcarbonyl, arylcarbonyl, haloarylcarbonyl, lower
25
      alkoxyalkylene, lower alkoxyarylene, lower
      carboxyalkylcarbonyl, lower alkoxyalkylcarbonyl, lower
     heterocyclylalkylcarbonyl, lower alkylsulfonylalkylene,
     amino, lower aminoalkyl, lower aralkylamino, lower
     alkylaminoalkylene, aminocarbonyl, lower
     alkylcarbonylamino, lower alkylcarbonylaminoalkylene,
30
     lower alkylaminoalkylcarbonyl, lower
     alkylaminoalkylcarbonylamino, lower
     aminoalkylcarbonylaminoalkyl, lower alkoxycarbonylamino,
     lower alkoxyalkylcarbonylamino, lower
35
     alkoxycarbonylaminoalkylene, lower alkylimidocarbonyl,
     amidino, lower alkylamidino, lower aralkylamidino,
     guanidino, lower guanidinoalkylene, and lower
     alkylsulfonylamino; and
           R^{202} and R^{203} are independently selected from hydrido,
40
     lower alkyl, aryl and lower aralkyl; and
           y is 0, 1, 2 or 3; and
```

R⁴ is selected from aryl selected from phenyl, biphenyl, naphthyl, wherein said aryl is optionally substituted at a substitutable position with one or more radicals independently selected from halo, lower alkyl, lower alkoxy, aryloxy, lower aralkoxy, lower haloalkyl, lower alkylthio, lower alkylamino, nitro, and hydroxy; and

R⁵ is selected from hydrido, halo, amino, cyano, 50 aminocarbonyl, lower alkyl, lower alkoxy, hydroxy, lower aminoalkyl, lower aralkyl, lower aralkyloxy, lower aralkylamino, lower alkoxycarbonyl, lower alkylamino, lower hydroxyalkylamino, lower alkylcarbonyl, lower aralkenyl, lower arylheterocyclyl, carboxy, lower 55 cycloalkylamino, lower hydroxycycloalkylamino, lower alkoxycarbonylamino, lower alkoxyaralkylamino, lower alkylaminoalkylamino, lower heterocyclylamino, lower heterocyclylalkylamino, lower aralkylheterocyclylamino, lower alkylaminocarbonyl, lower alkylcarbonyl, lower 60 alkoxyaralkylamino, hydrazinyl, and lower alkylhydrazinyl, or -NR62R63 wherein R62 is lower alkylcarbonyl or amino, and R^{63} is lower alkyl or lower phenylalkyl; or

a pharmaceutically-acceptable salt or tautomer thereof.

- 95. A compound of Claim 94 wherein R^2 is R^{200} -heterocyclyl- R^{201} .
- 96. A compound of Claim 94' wherein R^2 is R^{200} -cycloalkyl- R^{201} .
 - 97. A compound of Claim 94 wherein:
- \mathbb{R}^1 is selected from hydrido, methyl, ethyl, hydroxyethyl and propargyl; and
- $$\rm R^2$$ is $R^{200}\mbox{-piperidinyl-}R^{201},~R^{200}\mbox{-piperazinyl-}R^{201},~or$ $$\rm R^{200}\mbox{-cyclohexyl-}R^{201}$$ wherein:

 R^{200} is selected from:

```
- (CR<sup>202</sup>R<sup>203</sup>),-;
          -NR^{202}-:
          -S-:
10
          -0-;
          or R<sup>200</sup> represents a bond;
          R^{201} represents one or more radicals selected from
     the group consisting of hydroxy, hydroxymethyl,
     hydroxyethyl, hydroxypropyl, hydroxybutyl, (1-hydroxy-
     1,1-dimethyl) ethyl, cyclopropyl, cyclobutyl, cyclopentyl,
15
     cyclohexyl, methoxymethylene, methoxyethylene,
     methoxypropylene, ethoxyethylene, ethoxypropylene,
     propoxyethylene, propoxypropylene, methoxyphenylene,
     ethoxyphenylene, propoxyphenylene, cyclopropylcarbonyl,
     cyclobutylcarbonyl, cyclopentylcarbonyl,
20
     cyclohexylcarbonyl, benzoyl, chlorobenzoyl,
     fluorobenzoyl, hydroxymethylcarbonyl,
     hydroxyethylcarbonyl, hydroxypropylcarbonyl,
     carboxymethylcarbonyl, carboxyethylcarbonyl,
     carboxypropylcarbonyl, methoxymethylcarbonyl,
25
     methoxyethylcarbonyl, methoxypropylcarbonyl,
     ethoxymethylcarbonyl, ethoxyethylcarbonyl,
     ethoxypropylcarbonyl, propoxymethylcarbonyl,
     propoxyethylcarbonyl, propoxypropylcarbonyl,
30
     methoxyphenylcarbonyl, ethoxyphenylcarbonyl,
     propoxyphenylcarbonyl, piperidinylmethylcarbonyl,
     piperazinylmethylcarbonyl, morpholinylcarbonyl,
     methylsulfonylmethylene, amino, aminomethyl, aminoethyl,
     aminopropyl, phenylamino, benzylamino,
     methylaminomethylene, ethylaminomethylene,
35
     methylaminoethylene, ethylaminoethylene, aminocarbonyl,
     methylcarbonylamino, ethylcarbonylamino,
     methylaminomethylcarbonyl, ethylaminomethylcarbonyl,
     methylcarbonylaminomethylene,
40
     ethylcarbonylaminomethylene,
     aminomethylcarbonylaminocarbonylmethylene,
     methoxycarbonylamino, ethoxycarbonylamino,
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methoxymethylcarbonylamino, methoxyethylcarbonylamino, ethoxymethylcarbonylamino, ethoxyethylcarbonylamino, methoxycarbonylaminomethylene, ethoxycarbonylaminomethylene, methylimidocarbonyl, ethylimidocarbonyl, amidino, methylamidino, methylamidino, benzylamidino, guanidino, guanidinomethylene, guanidinoethylene, and methylsulfonylamino; and

 R^{202} and R^{203} are independently selected from hydrido, methyl, ethyl, propyl, butyl, phenyl and benzyl; and y is 0, 1 or 2; and

R⁴ is phenyl, wherein said phenyl is optionally substituted with one or more radicals independently selected from methylthio, fluoro, chloro, bromo, iodo, methyl, ethyl, methoxy, ethoxy, phenoxy, benzyloxy, trifluoromethyl, nitro, dimethylamino, and hydroxy; and

R⁵ is selected from hydrido, fluoro, chloro, bromo, iodo, hydroxy, methyl, ethyl, propyl, benzyl, fluorophenylethyl, fluorophenylethenyl, fluorophenylpyrazolyl, cyano, carboxy, methoxy, methoxycarbonyl, aminocarbonyl, acetyl, methylamino, dimethylamino, 2-methylbutylamino, ethylamino,

- dimethylaminoethylamino, hydroxyethylamino, hydroxypropylamino, hydroxybutylamino, hydroxycyclobutylamino, hydroxycyclobutylamino, hydroxycyclopentylamino, hydroxycyclohexylamino, imidazolylamino, morpholinylethylamino, (1-ethyl-2-
- 70 hydroxy) ethylamino, piperidinylamino, pyridinylmethylamino, phenylmethylpiperidinylamino, aminomethyl, cyclopropylamino, amino, ethoxycarbonylamino, methoxyphenylmethylamino, phenylmethylamino, fluorophenylmethylamino,
- fluorophenylethylamino, methylaminoethylamino, dimethylaminoethylamino, methylaminopropylamino, dimethylaminopropylamino, methylaminobutylamino, dimethylaminobutylamino, methylaminopentylamino,

dimethylaminopentylamino, ethylaminoethylamino,
diethylaminoethylamino, ethylaminopropylamino,
diethylaminopropylamino, ethylaminobutylamino,
diethylaminobutylamino, ethylaminopentylamino,
methylaminocarbonyl, methylcarbonyl, ethylcarbonyl,
hydrazinyl, and 1-methylhydrazinyl, or -NR⁶²R⁶³ wherein R⁶²
is methylcarbonyl or amino, and R⁶³ is methyl or benzyl;
or

a pharmaceutically-acceptable salt or tautomer thereof.

- 98. A compound of Claim 97 wherein R^2 is R^{200} -piperidinyl- R^{201} .
- 99. A compound of Claim 97 wherein R^2 is R^{200} -pyrazinyl- R^{201} .
- 100. A compound of Claim 97 wherein R^2 is R^{200} -cyclohexyl- R^{201} .
 - 101. A compound of Claim 94 having the Formula XA:

wherein:

5

Z represents a carbon atom or a nitrogen atom; and R^1 is selected from hydrido, methyl, ethyl,

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hydroxyethyl and propargyl; and
           R^2 is R^{200}-piperidinyl-R^{201} wherein:
           R<sup>200</sup> is selected from:
           - (CR<sup>202</sup>R<sup>203</sup>),-;
10
           -NR^{202}-;
           -S-;
           -0-;
           or R<sup>200</sup> represents a bond;
          R<sup>201</sup> represents one or more radicals selected from
15
     the group consisting of hydroxy, hydroxymethyl,
     hydroxyethyl, hydroxypropyl, hydroxybutyl, (1-hydroxy-
     1,1-dimethyl)ethyl, cyclopropyl, cyclobutyl, cyclopentyl,
     cyclohexyl, methoxymethylene, methoxyethylene,
     methoxypropylene, ethoxyethylene, ethoxypropylene,
20
     propoxyethylene, propoxypropylene, methoxyphenylene,
     ethoxyphenylene, propoxyphenylene, cyclopropylcarbonyl,
     cyclobutylcarbonyl, cyclopentylcarbonyl,
     cyclohexylcarbonyl, benzoyl, chlorobenzoyl,
     fluorobenzoyl, hydroxymethylcarbonyl,
25
     hydroxyethylcarbonyl, hydroxypropylcarbonyl,
     carboxymethylcarbonyl, carboxyethylcarbonyl,
     carboxypropylcarbonyl, methoxymethylcarbonyl,
     methoxyethylcarbonyl, methoxypropylcarbonyl,
     ethoxymethylcarbonyl, ethoxyethylcarbonyl,
30
     ethoxypropylcarbonyl, propoxymethylcarbonyl,
     propoxyethylcarbonyl, propoxypropylcarbonyl,
     methoxyphenylcarbonyl, ethoxyphenylcarbonyl,
     propoxyphenylcarbonyl, piperidinylmethylcarbonyl,
     piperazinylmethylcarbonyl, morpholinylcarbonyl,
35
     methylsulfonylmethylene, amino, aminomethyl, aminoethyl,
     aminopropyl, N-methylamino, N,N-dimethylamino, N-
     ethylamino, N, N-diethylamino, N-propylamino, N, N-
     dipropylamino, phenylamino, benzylamino,
     methylaminomethylene, ethylaminomethylene,
40
     methylaminoethylene, ethylaminoethylene, aminocarbonyl,
     methylcarbonylamino, ethylcarbonylamino,
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methylaminomethylcarbonyl, ethylaminomethylcarbonyl, methylcarbonylaminomethylene, ethylcarbonylaminomethylene,

- aminomethylcarbonylaminocarbonylmethylene,
 methoxycarbonylamino, ethoxycarbonylamino,
 methoxymethylcarbonylamino, methoxyethylcarbonylamino,
 ethoxymethylcarbonylamino, ethoxyethylcarbonylamino,
 methoxycarbonylaminomethylene,
- ethoxycarbonylaminomethylene, methylimidocarbonyl, ethylimidocarbonyl, amidino, methylamidino, methylamidino, benzylamidino, guanidino, guanidinomethylene, guanidinoethylene, and methylsulfonylamino; and

 R^{202} and R^{203} are independently selected from hydrido, methyl, ethyl, propyl, butyl, phenyl and benzyl; and y is 0, 1 or 2; and

R⁴ is phenyl, wherein said phenyl is optionally substituted with one or more radicals independently selected from fluoro, chloro, methyl, ethyl, methoxy and ethoxy; and

 R^5 is selected from hydrido, fluoro, chloro, bromo, hydroxy, methyl, ethyl, propyl, benzyl, cyano, carboxy, methoxy, methoxycarbonyl, aminocarbonyl, acetyl,

- methylamino, dimethylamino, 2-methylbutylamino, ethylamino, dimethylaminoethylamino, hydroxyethylamino, hydroxypropylamino, hydroxybutylamino, hydroxycyclopropylamino, hydroxycyclobutylamino, hydroxycyclopentylamino, hydroxycyclohexylamino,
- imidazolylamino, morpholinylethylamino, (1-ethyl-2-hydroxy)ethylamino, piperidinylamino, pyridinylmethylamino, phenylmethylpiperidinylamino, aminomethyl, cyclopropylamino, amino, ethoxycarbonylamino, methoxyphenylmethylamino,
- phenylmethylamino, fluorophenylmethylamino, fluorophenylethylamino, methylaminoethylamino, dimethylaminoethylamino, methylaminopropylamino,

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dimethylaminopropylamino, methylaminobutylamino,
     dimethylaminobutylamino, methylaminopentylamino,
80
     dimethylaminopentylamino, ethylaminoethylamino,
     diethylaminoethylamino, ethylaminopropylamino,
     diethylaminopropylamino, ethylaminobutylamino,
     diethylaminobutylamino, ethylaminopentylamino,
     methylaminocarbonyl, methylcarbonyl, and ethylcarbonyl;
85
          a pharmaceutically-acceptable salt or tautomer
     thereof.
          102. A compound of Claim 101 wherein:
          R1 is selected from hydrido, methyl, ethyl,
     hydroxyethyl and propargyl; and
          R^2 is R^{200}-piperidinyl-R^{201} wherein:
          R<sup>200</sup> is selected from:
 5
          methylene;
          -NR^{202}-;
          -S-;
          -0-;
10
          or R<sup>200</sup> represents a bond;
          R<sup>201</sup> represents one or more radicals selected from
     the group consisting of hydroxy, hydroxymethyl,
     hydroxyethyl, hydroxypropyl, (1-hydroxy-1,1-
     dimethyl) ethyl, methoxymethyl, methoxyethyl,
15
     methoxypropyl, ethoxyethyl, ethoxypropyl, propoxyethyl,
     propoxypropyl, methoxyphenyl, ethoxyphenyl,
     propoxyphenyl, hydroxymethylcarbonyl,
     hydroxyethylcarbonyl, carboxymethylcarbonyl,
     carboxyethylcarbonyl, methoxymethylcarbonyl,
20
     methoxyethylcarbonyl, methoxypropylcarbonyl,
     ethoxymethylcarbonyl, ethoxyethylcarbonyl,
     ethoxypropylcarbonyl, propoxymethylcarbonyl,
     propoxyethylcarbonyl, propoxypropylcarbonyl,
     methoxyphenylcarbonyl, ethoxyphenylcarbonyl,
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     propoxyphenylcarbonyl, methylsulfonylmethylene, amino,
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aminomethyl, aminoethyl, aminopropyl, N-benzylamino, methylaminomethylene, aminocarbonyl, methoxycarbonylamino, ethoxycarbonylamino, or methylsulfonylamino; and

 R^{202} is selected from hydrido, methyl, ethyl, phenyl and benzyl; and

R⁴ is phenyl, wherein said phenyl is optionally substituted with one or more radicals independently selected from fluoro, chloro, methyl, ethyl, methoxy and ethoxy; and

R⁵ is selected from hydrido, fluoro, chloro, bromo, hydroxy, methyl, ethyl, cyano, carboxy, methoxy, methoxycarbonyl, aminocarbonyl, acetyl, methylamino, dimethylamino, ethylamino, dimethylaminoethylamino, hydroxyethylamino, hydroxypropylamino, hydroxybutylamino, hydroxycyclopropylamino, hydroxycyclobutylamino, hydroxycyclopentylamino, hydroxycyclohexylamino, (1ethyl-2-hydroxy) ethylamino, aminomethyl, cyclopropylamino, amino, ethoxycarbonylamino, methoxyphenylmethylamino, phenylmethylamino, fluorophenylmethylamino, fluorophenylethylamino, methylaminoethylamino, dimethylaminoethylamino, methylaminopropylamino, dimethylaminopropylamino, methylaminobutylamino, dimethylaminobutylamino, methylaminopentylamino, dimethylaminopentylamino, ethylaminoethylamino, diethylaminoethylamino,

ethylaminoethylamino, diethylaminoethylamino, ethylaminopropylamino, diethylaminopropylamino, ethylaminobutylamino, diethylaminobutylamino, ethylaminopentylamino, methylaminocarbonyl, methylcarbonyl, and ethylcarbonyl; or

a pharmaceutically-acceptable salt or tautomer thereof.

103. A compound of Claim 101 wherein: R^1 is hydrido; and R^2 is R^{200} -piperidinyl- R^{201} wherein:

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R<sup>200</sup> is selected from:
 5
          methylene;
          -NR^{202}-;
          -S-;
          -0-;
          or R200 represents a bond;
          R<sup>201</sup> represents one or more radicals selected from
10
     the group consisting of hydroxy, hydroxymethyl,
     hydroxyethyl, hydroxypropyl, methoxymethyl, methoxyethyl,
     methoxypropyl, ethoxyethyl, ethoxypropyl, propoxyethyl,
     propoxypropyl, methoxyphenyl, ethoxyphenyl,
15
     propoxyphenyl, hydroxymethylcarbonyl,
     hydroxyethylcarbonyl, carboxymethylcarbonyl,
     carboxyethylcarbonyl, methoxymethylcarbonyl,
     methoxyethylcarbonyl, ethoxymethylcarbonyl,
     ethoxyethylcarbonyl, methoxyphenylcarbonyl,
     ethoxyphenylcarbonyl, amino, aminomethyl, aminoethyl,
20
     aminopropyl, N-benzylamino, methylaminomethylene,
     aminocarbonyl, methoxycarbonylamino, and
     ethoxycarbonylamino; and
          R^{202} is selected from hydrido, methyl phenyl and
     benzyl; and
25
          R4 is phenyl, wherein said phenyl is optionally
     substituted with one or more radicals independently
     selected from fluoro, chloro, methyl, and methoxy; and
          R<sup>5</sup> is selected from hydrido, methylamino,
     dimethylamino, 2-methylbutylamino, ethylamino,
30
     dimethylamino, hydroxypropylamino,
     hydroxyethylamino, hydroxypropylamino, hydroxybutylamino,
     hydroxycyclopropylamino, hydroxycyclobutylamino,
     hydroxycyclopentylamino, hydroxycyclohexylamino, (1-
     ethyl-2-hydroxy) ethylamino, aminomethyl,
35
     cyclopropylamino, amino, dimethylaminoethylamino,
     dimethylaminopropylamino, dimethylaminobutylamino,
     dimethylaminopentylamino, diethylaminoethylamino,
     diethylaminopropylamino, diethylaminobutylamino, and
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diethylaminopentylamino; or 40

a pharmaceutically-acceptable salt or tautomer thereof.

> A compound of Claim 101 wherein: 104.

R1 is hydrido; and

 R^2 is R^{200} -piperidinyl- R^{201} wherein:

R²⁰⁰ is selected from:

methylene; 5

 $-NR^{202}-;$

-S-;

-0-;

or R200 represents a bond;

R²⁰¹ represents one or more radicals selected from 10 the group consisting of methoxyethyl, methylcarbonyl, hydroxymethylcarbonyl, methoxymethylcarbonyl, and amino; and

R²⁰² is selected from hydrido and methyl; and R4 is phenyl, wherein said phenyl is optionally substituted with one or more radicals independently selected from fluoro, chloro, methyl, and methoxy; and

R⁵ is selected from hydrido, hydroxypropylamino, hydroxycyclohexylamino, diethylaminoethylamino; or

a pharmaceutically-acceptable salt or tautomer thereof.

A compound of Claim 94 having the Formula XA:

(XA)

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wherein:
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Z represents a carbon atom or a nitrogen atom; and
 5
          R1 is selected from hydrido, methyl, ethyl,
     hydroxyethyl and propargyl; and
          R^2 is R^{200}-piperazinyl-R^{201} wherein:
          R<sup>200</sup> is selected from:
          -(CR^{202}R^{203}), -;
10
          -NR^{202}-;
          -S-;
          -0-;
          or R<sup>200</sup> represents a bond;
          R^{201} represents one or more radicals selected from
15
     the group consisting of hydroxy, hydroxymethyl,
     hydroxyethyl, hydroxypropyl, hydroxybutyl, (1-hydroxy-
     1,1-dimethyl)ethyl, cyclopropyl, cyclobutyl, cyclopentyl,
     cyclohexyl, methoxymethylene, methoxyethylene,
     methoxypropylene, ethoxyethylene, ethoxypropylene,
20
     propoxyethylene, propoxypropylene, methoxyphenylene,
     ethoxyphenylene, propoxyphenylene, cyclopropylcarbonyl,
     cyclobutylcarbonyl, cyclopentylcarbonyl,
     cyclohexylcarbonyl, benzoyl, chlorobenzoyl,
     fluorobenzoyl, hydroxymethylcarbonyl,
25
     hydroxyethylcarbonyl, hydroxypropylcarbonyl,
     carboxymethylcarbonyl, carboxyethylcarbonyl,
     carboxypropylcarbonyl, methoxymethylcarbonyl,
     methoxyethylcarbonyl, methoxypropylcarbonyl,
     ethoxymethylcarbonyl, ethoxyethylcarbonyl,
30
     ethoxypropylcarbonyl, propoxymethylcarbonyl,
     propoxyethylcarbonyl, propoxypropylcarbonyl,
     methoxyphenylcarbonyl, ethoxyphenylcarbonyl,
     propoxyphenylcarbonyl, piperidinylmethylcarbonyl,
     piperazinylmethylcarbonyl, morpholinylcarbonyl,
35
     methylsulfonylmethylene, amino, aminomethyl, aminoethyl,
     aminopropyl, phenylamino, benzylamino,
     methylaminomethylene, ethylaminomethylene,
     methylaminoethylene, ethylaminoethylene, aminocarbonyl,
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methylcarbonylamino, ethylcarbonylamino,

methylaminomethylcarbonyl, ethylaminomethylcarbonyl,

methylcarbonylaminomethylene,

ethylcarbonylaminomethylene,

aminomethylcarbonylaminocarbonylmethylene,

methoxycarbonylamino, ethoxycarbonylamino,

methoxymethylcarbonylamino, methoxyethylcarbonylamino,

ethoxymethylcarbonylamino, ethoxyethylcarbonylamino,

methoxycarbonylaminomethylene,

ethoxycarbonylaminomethylene, methylimidocarbonyl,

ethylimidocarbonyl, amidino, methylamidino,

50 methylamidino, benzylamidino, guanidino, guanidinomethylene, guanidinoethylene, and methylsulfonylamino; and

 $\rm R^{202}$ and $\rm R^{203}$ are independently selected from hydrido, methyl, ethyl, propyl, butyl, phenyl and benzyl; and

y is 0, 1 or 2; and

R⁴ is phenyl, wherein said phenyl is optionally substituted with one or more radicals independently selected from fluoro, chloro, methyl, ethyl, methoxy and ethoxy; and

R⁵ is selected from hydrido, fluoro, chloro, bromo, hydroxy, methyl, ethyl, propyl, benzyl, cyano, carboxy, methoxy, methoxycarbonyl, aminocarbonyl, acetyl, methylamino, dimethylamino, 2-methylbutylamino, ethylamino, dimethylaminoethylamino, hydroxyethylamino,

hydroxypropylamino, hydroxybutylamino, hydroxycyclopropylamino, hydroxycyclobutylamino, hydroxycyclopentylamino, hydroxycyclohexylamino, imidazolylamino, morpholinylethylamino, (1-ethyl-2hydroxy)ethylamino, piperidinylamino,

70 pyridinylmethylamino, phenylmethylpiperidinylamino, aminomethyl, cyclopropylamino, amino, ethoxycarbonylamino, methoxyphenylmethylamino, phenylmethylamino, fluorophenylmethylamino, fluorophenylethylamino, methylaminoethylamino,

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     dimethylaminoethylamino, methylaminopropylamino,
     dimethylaminopropylamino, methylaminobutylamino,
     dimethylaminobutylamino, methylaminopentylamino,
     dimethylaminopentylamino, ethylaminoethylamino,
     diethylaminoethylamino, ethylaminopropylamino,
     diethylaminopropylamino, ethylaminobutylamino,
80
     diethylaminobutylamino, ethylaminopentylamino,
     methylaminocarbonyl, methylcarbonyl, and ethylcarbonyl;
     or
           a pharmaceutically-acceptable salt or tautomer
85
     thereof.
           106. A compound of Claim 105 wherein:
           R1 is selected from hydrido, methyl, ethyl,
     hydroxyethyl and propargyl; and
           R^2 is R^{200}-piperazinyl-R^{201} wherein:
 5
           R<sup>200</sup> is selected from:
           -(CR^{202}R^{203})_{v}-;
           -NR^{202}-;
           -S-;
           -0-;
           or R<sup>200</sup> represents a bond;
10
           R<sup>201</sup> represents one or more radicals selected from
     the group consisting of hydroxy, hydroxymethyl,
     hydroxyethyl, hydroxypropyl, (1-hydroxy-1,1-
     dimethyl)ethyl, cyclopropyl, cyclobutyl, cyclopentyl,
15
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the group consisting of hydroxy, hydroxymethyl,
hydroxyethyl, hydroxypropyl, (1-hydroxy-1,1dimethyl)ethyl, cyclopropyl, cyclobutyl, cyclopentyl,
cyclohexyl, methoxymethylene, methoxyethylene,
ethoxyethylene, methoxyphenylene, ethoxyphenylene,
cyclopropylcarbonyl, cyclobutylcarbonyl,
cyclopentylcarbonyl, cyclohexylcarbonyl, benzoyl,
chlorobenzoyl, fluorobenzoyl, hydroxymethylcarbonyl,
hydroxyethylcarbonyl, hydroxypropylcarbonyl,
carboxymethylcarbonyl, carboxyethylcarbonyl,
methoxyethylcarbonyl, methoxymethylcarbonyl,
ethoxymethylcarbonyl, ethoxyethylcarbonyl,

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ethoxypropylcarbonyl, propoxymethylcarbonyl,
propoxyethylcarbonyl, propoxypropylcarbonyl,
methoxyphenylcarbonyl, ethoxyphenylcarbonyl,
propoxyphenylcarbonyl, piperidinylmethylcarbonyl,
piperazinylmethylcarbonyl, morpholinylcarbonyl,
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- methylsulfonylmethylene, amino, aminomethyl, aminoethyl, aminopropyl, phenylamino, benzylamino, methylaminomethylene, ethylaminomethylene, methylaminoethylene, ethylaminoethylene, aminocarbonyl, methylcarbonylamino, ethylcarbonylamino,
- methylaminomethylcarbonyl, ethylaminomethylcarbonyl,
 methylcarbonylaminomethylene,
 ethylcarbonylaminomethylene,
 aminomethylcarbonylaminocarbonylmethylene,
 methoxycarbonylamino, ethoxycarbonylamino,
- methoxymethylcarbonylamino, methoxyethylcarbonylamino, ethoxymethylcarbonylamino, ethoxyethylcarbonylamino, methoxycarbonylaminomethylene, ethoxycarbonylaminomethylene, and methylsulfonylamino; and

 \mbox{R}^{202} and \mbox{R}^{203} are independently selected from hydrido, methyl, ethyl, phenyl and benzyl; and

y is 0, 1 or 2; and

 \mathbb{R}^4 is phenyl, wherein said phenyl is optionally substituted with one or more radicals independently selected from fluoro, chloro, methyl, ethyl, methoxy and ethoxy; and

R⁵ is selected from hydrido, fluoro, chloro, bromo, hydroxy, methyl, ethyl, cyano, carboxy, methoxy, methoxycarbonyl, aminocarbonyl, acetyl, methylamino, dimethylamino, ethylamino, dimethylaminoethylamino, hydroxyethylamino, hydroxypropylamino, hydroxybutylamino, hydroxycyclopropylamino, hydroxycyclobutylamino, hydroxycyclopentylamino, hydroxycyclohexylamino, (1-ethyl-2-hydroxy)ethylamino, aminomethyl,

60 cyclopropylamino, amino, ethoxycarbonylamino,

methoxyphenylmethylamino, phenylmethylamino, fluorophenylmethylamino, fluorophenylethylamino, methylaminoethylamino, dimethylaminoethylamino, methylaminopropylamino, dimethylaminopropylamino, methylaminobutylamino, dimethylaminobutylamino, methylaminopentylamino, dimethylaminopentylamino, ethylaminoethylamino, diethylaminoethylamino, ethylaminopropylamino, diethylaminopropylamino, ethylaminobutylamino, diethylaminobutylamino, ethylaminobutylamino, diethylaminobutylamino, ethylaminopentylamino, methylaminocarbonyl, methylcarbonyl, and ethylcarbonyl; or

a pharmaceutically-acceptable salt or tautomer thereof.

107. A compound of Claim 94 having the Formula XA:

wherein:

Z represents a carbon atom or a nitrogen atom; and

R¹ is selected from hydrido, methyl, ethyl,
hydroxyethyl and propargyl; and

R² is R²00-cyclohexyl-R²01 wherein:

R²00 is selected from:
-(CR²02R²03)y-;
-NR²02-;
-S-;

-0-;

or R²⁰⁰ represents a bond;

R²⁰¹ represents one or more radicals selected from
the group consisting of hydroxy, hydroxymethyl,
hydroxyethyl, hydroxypropyl, hydroxybutyl, (1-hydroxy1,1-dimethyl)ethyl, cyclopropyl, cyclobutyl, cyclopentyl,
cyclohexyl, methoxymethylene, methoxyethylene,
methoxypropylene, ethoxyethylene, ethoxypropylene,

- propoxyethylene, propoxypropylene, methoxyphenylene, ethoxyphenylene, propoxyphenylene, cyclopropylcarbonyl, cyclobutylcarbonyl, cyclopentylcarbonyl, cyclohexylcarbonyl, benzoyl, chlorobenzoyl, fluorobenzoyl, hydroxymethylcarbonyl,
- 25 hydroxyethylcarbonyl, hydroxypropylcarbonyl, carboxymethylcarbonyl, carboxyethylcarbonyl, carboxypropylcarbonyl, methoxymethylcarbonyl, methoxyethylcarbonyl, ethoxymethylcarbonyl, ethoxyethylcarbonyl,
- ethoxypropylcarbonyl, propoxymethylcarbonyl, propoxyethylcarbonyl, propoxypropylcarbonyl, methoxyphenylcarbonyl, ethoxyphenylcarbonyl, propoxyphenylcarbonyl, piperidinylmethylcarbonyl, piperazinylmethylcarbonyl, morpholinylcarbonyl,
- methylsulfonylmethylene, amino, aminomethyl, aminoethyl, aminopropyl, phenylamino, benzylamino, methylaminomethylene, ethylaminomethylene, methylaminoethylene, ethylaminoethylene, aminocarbonyl, methylcarbonylamino, ethylcarbonylamino,
- methylaminomethylcarbonyl, ethylaminomethylcarbonyl, methylcarbonylaminomethylene, ethylcarbonylaminomethylene, aminomethylcarbonylaminocarbonylmethylene, methoxycarbonylamino, ethoxycarbonylamino,
- 45 methoxymethylcarbonylamino, methoxyethylcarbonylamino, ethoxymethylcarbonylamino, ethoxyethylcarbonylamino, methoxycarbonylaminomethylene,

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65

ethoxycarbonylaminomethylene, methylimidocarbonyl, ethylimidocarbonyl, amidino, methylamidino, methylamidino, methylamidino, guanidinomethylene, guanidinoethylene, and methylsulfonylamino; and

 R^{202} and R^{203} are independently selected from hydrido, methyl, ethyl, propyl, butyl, phenyl and benzyl; and y is 0, 1 or 2; and

R⁴ is phenyl, wherein said phenyl is optionally substituted with one or more radicals independently selected from fluoro, chloro, methyl, ethyl, methoxy and ethoxy; and

R⁵ is selected from hydrido, fluoro, chloro, bromo, hydroxy, methyl, ethyl, propyl, benzyl, cyano, carboxy, methoxy, methoxycarbonyl, aminocarbonyl, acetyl, methylamino, dimethylamino, 2-methylbutylamino, ethylamino, dimethylaminoethylamino, hydroxyethylamino, hydroxypropylamino, hydroxybutylamino, hydroxycyclopropylamino, hydroxycyclobutylamino, hydroxycyclopentylamino, hydroxycyclobexylamino, imidazolylamino, morpholinylethylamino, (1-ethyl-2-hydroxy)ethylamino, piperidinylamino,

pyridinylmethylamino, phenylmethylpiperidinylamino, aminomethyl, cyclopropylamino, amino, ethoxycarbonylamino, methoxyphenylmethylamino, phenylmethylamino, fluorophenylmethylamino, fluorophenylethylamino, methylaminoethylamino,

dimethylaminoethylamino, methylaminopropylamino, dimethylaminopropylamino, methylaminobutylamino, dimethylaminobutylamino, methylaminopentylamino, dimethylaminopentylamino, ethylaminoethylamino, diethylaminoethylamino, ethylaminopropylamino,

diethylaminopropylamino, ethylaminobutylamino, diethylaminobutylamino, ethylaminopentylamino, methylaminocarbonyl, methylcarbonyl, and ethylcarbonyl; or

a pharmaceutically-acceptable salt or tautomer

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85
     thereof.
                 A compound of Claim 107 wherein:
          R1 is selected from hydrido, methyl, ethyl,
     hydroxyethyl and propargyl; and
          R<sup>2</sup> is R<sup>200</sup>-cyclohexyl-R<sup>201</sup> wherein:
          R<sup>200</sup> is selected from:
.5
           -(CR^{202}R^{203})_{v}-;
           -NR^{202}-;
           -S-;
           -0-:
          or R<sup>200</sup> represents a bond;
10
          R<sup>201</sup> represents one or more radicals selected from
     the group consisting of hydroxy, hydroxymethyl,
     hydroxyethyl, hydroxypropyl, (1-hydroxy-1,1-
     dimethyl)ethyl, cyclopropyl, cyclobutyl, cyclopentyl,
     cyclohexyl, methoxymethylene, methoxyethylene,
15
     methoxypropylene, ethoxyethylene, ethoxypropylene,
     propoxyethylene, propoxypropylene, methoxyphenylene,
     ethoxyphenylene, propoxyphenylene, cyclopropylcarbonyl,
     cyclobutylcarbonyl, cyclopentylcarbonyl,
20
     cyclohexylcarbonyl, benzoyl, chlorobenzoyl,
     fluorobenzoyl, hydroxymethylcarbonyl,
     hydroxyethylcarbonyl, hydroxypropylcarbonyl,
     carboxymethylcarbonyl, carboxyethylcarbonyl,
     carboxypropylcarbonyl, methoxymethylcarbonyl,
25
     methoxyethylcarbonyl, methoxypropylcarbonyl,
     ethoxymethylcarbonyl, ethoxyethylcarbonyl,
     ethoxypropylcarbonyl, propoxymethylcarbonyl,
     propoxyethylcarbonyl, propoxypropylcarbonyl,
     methoxyphenylcarbonyl, ethoxyphenylcarbonyl,
     propoxyphenylcarbonyl, piperidinylmethylcarbonyl,
30
     piperazinylmethylcarbonyl, morpholinylcarbonyl,
     methylsulfonylmethylene, amino, aminomethyl, aminoethyl,
     aminopropyl, phenylamino, benzylamino,
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methylaminomethylene, ethylaminomethylene, methylaminoethylene, ethylaminoethylene, aminocarbonyl, 35 methylcarbonylamino, ethylcarbonylamino, methylaminomethylcarbonyl, ethylaminomethylcarbonyl, methylcarbonylaminomethylene, ethylcarbonylaminomethylene,

aminomethylcarbonylaminocarbonylmethylene, 40 methoxycarbonylamino, ethoxycarbonylamino, methoxymethylcarbonylamino, methoxyethylcarbonylamino, ethoxymethylcarbonylamino, ethoxyethylcarbonylamino, methoxycarbonylaminomethylene, and ethoxycarbonylaminomethylene; and

 R^{202} and R^{203} are independently selected from hydrido, methyl, ethyl, phenyl and benzyl; and

y is 0, 1 or 2; and

R4 is phenyl, wherein said phenyl is optionally substituted with one or more radicals independently selected from fluoro, chloro, methyl, ethyl, methoxy and ethoxy; and

R⁵ is selected from hydrido, fluoro, chloro, bromo, hydroxy, methyl, ethyl, cyano, carboxy, methoxy, methoxycarbonyl, aminocarbonyl, acetyl, methylamino, 55 dimethylamino, ethylamino, dimethylaminoethylamino, hydroxyethylamino, hydroxypropylamino, hydroxybutylamino, hydroxycyclopropylamino, hydroxycyclobutylamino, hydroxycyclopentylamino, hydroxycyclohexylamino, (1-60 ethyl-2-hydroxy)ethylamino, aminomethyl, cyclopropylamino, amino, ethoxycarbonylamino, methoxyphenylmethylamino, phenylmethylamino, fluorophenylmethylamino, fluorophenylethylamino, methylaminoethylamino, dimethylaminoethylamino, methylaminopropylamino, dimethylaminopropylamino, 65 methylaminobutylamino, dimethylaminobutylamino, methylaminopentylamino, dimethylaminopentylamino, ethylaminoethylamino, diethylaminoethylamino,

ethylaminopropylamino, diethylaminopropylamino,

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ethylaminobutylamino, diethylaminobutylamino,
70
     ethylaminopentylamino, methylaminocarbonyl,
     methylcarbonyl, and ethylcarbonyl; or
           a pharmaceutically-acceptable salt or tautomer
     thereof.
                 A compound of Claim 107 wherein:
           R<sup>1</sup> is hydrido; and
           R<sup>2</sup> is R<sup>200</sup>-cyclohexyl-R<sup>201</sup> wherein:
           R<sup>200</sup> is selected from:
 5
           methylene;
           -NR^{202}-;
           -S-;
           -0-:
           or R<sup>200</sup> represents a bond;
           R<sup>201</sup> represents one or more radicals selected from
10
     the group consisting of amino, aminomethyl, aminoethyl,
     aminopropyl, phenylamino, benzylamino,
     methylaminomethylene, ethylaminomethylene,
     methylaminoethylene, ethylaminoethylene, aminocarbonyl,
     methylcarbonylamino, ethylcarbonylamino,
15
     methylaminomethylcarbonyl, ethylaminomethylcarbonyl,
     methylcarbonylaminomethylene,
     ethylcarbonylaminomethylene,
     aminomethylcarbonylaminocarbonylmethylene,
20
     methoxycarbonylamino, ethoxycarbonylamino,
     methoxymethylcarbonylamino, methoxyethylcarbonylamino,
     ethoxymethylcarbonylamino, ethoxyethylcarbonylamino,
     methoxycarbonylaminomethylene, and
     ethoxycarbonylaminomethylene; and
           R<sup>202</sup> is selected from hydrido, methyl, phenyl and
25
     benzyl; and
```

R⁴ is phenyl, wherein said phenyl is optionally substituted with one or more radicals independently selected from fluoro, chloro, methyl, and methoxy; and

R⁵ is selected from hydrido, methylamino,

5

dimethylamino, 2-methylbutylamino, ethylamino,
dimethylaminoethylamino, hydroxypropylamino,
hydroxyethylamino, hydroxypropylamino, hydroxybutylamino,
hydroxycyclopropylamino, hydroxycyclobutylamino,
hydroxycyclopentylamino, hydroxycyclohexylamino, (1ethyl-2-hydroxy)ethylamino, aminomethyl,
cyclopropylamino, amino, dimethylaminoethylamino,
dimethylaminopropylamino, dimethylaminobutylamino,
dimethylaminopentylamino, diethylaminoethylamino,
diethylaminopropylamino, diethylaminobutylamino,
and
diethylaminopentylamino; or

a pharmaceutically-acceptable salt or tautomer thereof.

- 110. A compound of Claim 94 wherein R² comprises a substituted piperidinyl or piperazinyl moiety with at least one substituent attached to the distal nitrogen heteroatom or to a carbon ring atom adjacent to the distal nitrogen heteroatom of the piperidine or piperazine ring.
- 111. A compound Claim 94 wherein R² comprises a substituted piperidinyl moiety with at least one substituent attached to the distal nitrogen heteroatom or to a carbon ring atom adjacent to the distal nitrogen heteroatom of the piperidine ring.
- 112. A compound of Claim 94 wherein R² comprises a substituted piperazinyl moiety with at least one substituent attached to the distal nitrogen heteroatom or to a carbon ring atom adjacent to the distal nitrogen heteroatom of the piperazine ring.
- 113. A compound of Claim 94 wherein Z represents a carbon atom.

- 114. A compound of Claim 94 wherein Z represents a nitrogen atom.
 - 115. A compound of Claim 94 wherein R1 is hydrido.
- 116. A compound of Claim 94 wherein R^{200} represents a bond.
- 117. A compound of Claim 94 wherein R²⁰¹ represents one or more radicals selected from the group consisting of lower hydroxyalkyl, lower hydroxyalkylcarbonyl, and lower alkylaminoalkylene.
- 118. A compound of Claim 94 wherein R²⁰¹ represents one or more radicals selected from the group consisting of hydroxymethyl, hydroxyethyl, hydroxypropyl, hydroxybutyl, (1-hydroxy-1,1-dimethyl)ethyl, hydroxymethylcarbonyl, hydroxyethylcarbonyl, hydroxypropylcarbonyl, methylaminomethylene, ethylaminomethylene, methylaminoethylene, and ethylaminoethylene.
- 119. A compound of Claim 94 wherein \mathbb{R}^4 is optionally substituted phenyl.
- 120. A compound of Claim 94 wherein R⁴ is phenyl optionally substituted at a substitutable position with one or more radicals independently selected from chloro, fluoro, bromo and iodo.
- 121. A compound of Claim 94 wherein R^4 is phenyl optionally substituted at the meta or para position with one or more chloro radicals.
 - 122. A compound of Claim 94 wherein R5 is hydrido.

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123. A compound of Claim 94 wherein:

R1 is hydrido;

R²⁰⁰ represents a bond;

R²⁰¹ represents one or more radicals selected from the group consisting of lower hydroxyalkyl, lower hydroxyalkylcarbonyl, and lower alkylaminoalkylene.

 ${
m R}^4$ is phenyl optionally substituted at a substitutable position with one or more radicals independently selected from halo; and

10 R⁵ is hydrido.

124. A compound of Claim 94 wherein:

R1 is hydrido;

R²⁰⁰ represents a bond;

R²⁰¹ represents one or more radicals selected from the group consisting of hydroxymethyl, hydroxyethyl, hydroxypropyl, hydroxybutyl, (1-hydroxy-1,1-dimethyl)ethyl, hydroxymethylcarbonyl, hydroxyethylcarbonyl, hydroxypropylcarbonyl, methylaminomethylene, ethylaminomethylene, methylaminoethylene, and ethylaminoethylene;

R⁴ is phenyl optionally substituted at a substitutable position with one or more radicals independently selected from chloro, fluoro, bromo and iodo; and

15 R^5 is hydrido.

125. A compound selected from compounds, their tautomers and their pharmaceutically acceptable salts, of the group consisting of:

$$C = \begin{pmatrix} N - NH \\ N \end{pmatrix}$$

126. A compound of Formula IA

wherein

R¹ is selected from hydrido, hydroxy, alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl, heterocyclyl, cycloalkylalkylene, cycloalkenylalkylene, heterocyclylalkylene, haloalkyl, haloalkenyl, haloalkynyl, hydroxyalkyl, hydroxyalkenyl,

- hydroxyalkynyl, aralkyl, aralkenyl, aralkynyl, arylheterocyclyl, carboxy, carboxyalkyl, alkoxyalkyl, alkenoxyalkyl, alkynoxyalkyl, aryloxyalkyl, alkoxyaryl, heterocyclyloxyalkyl, alkoxyalkoxy, mercaptoalkyl, alkylthioalkylene, alkenylthioalkylene,
- alkylthioalkenylene, amino, aminoalkyl, alkylamino, alkenylamino, alkynylamino, arylamino, heterocyclylamino, alkylsulfinyl, alkenylsulfinyl, alkynylsulfinyl, arylsulfinyl, heterocyclylsulfinyl, alkylsulfonyl, alkenylsulfonyl, alkynylsulfonyl, arylsulfonyl,
- 20 heterocyclylsulfonyl, alkylaminoalkylene, alkylsulfonylalkylene, acyl, acyloxycarbonyl, alkoxycarbonylalkylene, aryloxycarbonylalkylene, heterocyclyloxycarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, heterocyclyloxycarbonylarylene,
- alkylcarbonylalkylene, arylcarbonylalkylene, heterocyclylcarbonylalkylene, alkylcarbonylarylene, arylcarbonylarylene, heterocyclylcarbonylarylene, alkylcarbonyloxyalkylene, arylcarbonyloxyalkylene, heterocyclylcarbonyloxyalkylene, alkylcarbonyloxyarylene,

30 arylcarbonyloxyarylene, and
heterocyclylcarbonyloxyarylene; or

R¹ has the formula

$$\begin{array}{c|c}
R^{25} & O & R^{26} \\
C & C & C & R^{2} & C & R^{27} \\
H & R^{27} & R^{27}
\end{array}$$
(II)

wherein:

i is an integer from 0 to 9;

R²⁵ is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkylcarbonylalkylene, arylcarbonylalkylene, and heterocyclylcarbonylaminoalkylene; and

R²⁶ is selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkylalkylene, aralkyl, alkoxycarbonylalkylene, and alkylaminoalkyl; and

aryl, heterocyclyl, aralkyl, cycloalkylalkylene, cycloalkenylalkylene, cycloalkylarylene, cycloalkylcycloalkyl, heterocyclylalkylene, alkylarylene, alkylaralkyl, aralkylarylene, alkylheterocyclyl, alkylheterocyclylalkylene, alkylheterocyclylarylene,

R²⁷ is selected from alkyl, cycloalkyl, alkynyl,

- aralkylheterocyclyl, alkoxyalkylene, alkoxyarylene, alkoxyaralkyl, alkoxyheterocyclyl, alkoxyalkoxyarylene, aryloxyarylene, aralkoxyarylene, alkoxyheterocyclylalkylene, aryloxyalkoxyarylene, alkoxycarbonylalkylene, alkoxycarbonylheterocyclyl,
- alkoxycarbonylheterocyclylcarbonylalkylene, aminoalkyl, alkylaminoalkylene, arylaminocarbonylalkylene, alkoxyarylaminocarbonylalkylene, aminocarbonylalkylene, arylaminocarbonylalkylene, alkylaminocarbonylalkylene, arylcarbonylalkylene, alkoxycarbonylarylene,
- aryloxycarbonylarylene, alkylaryloxycarbonylarylene, arylcarbonylarylene, alkylarylcarbonylarylene, alkoxycarbonylheterocyclylarylene,

85

alkoxycarbonylalkoxylarylene,

heterocyclylcarbonylalkylarylene, alkylthioalkylene,

cycloalkylthioalkylene, alkylthioarylene,
aralkylthioarylene, heterocyclylthioarylene,
arylthioalklylarylene, arylsulfonylaminoalkylene,
alkylsulfonylarylene, alkylaminosulfonylarylene; wherein
said alkyl, cycloalkyl, aryl, heterocyclyl, aralkyl,

heterocyclylalkylene, alkylheterocyclylarylene, alkoxyarylene, aryloxyarylene, arylaminocarbonylalkylene, aryloxycarbonylarylene, arylcarbonylarylene, alkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, and alkylsulfonylarylene groups may be optionally substituted with one or more radicals independently selected from alkyl, halo, haloalkyl, alkoxy, keto, amino, nitro, and cyano; or

R²⁷ is -CHR²⁸R²⁹ wherein R²⁸ is alkoxycarbonyl, and R²⁹ is selected from aralkyl, aralkoxyalkylene, heterocyclylalkylene, alkylheterocyclylalkylene, alkoxycarbonylalkylene, alkylthioalkylene, and aralkylthioalkylene; wherein said aralkyl and heterocylcyl groups may be optionally substituted with one or more radicals independently selected from alkyl and nitro; or

R²⁶ and R²⁷ together with the nitrogen atom to which they are attached form a heterocycle, wherein said heterocycle is optionally substituted with one or more radicals independently selected from alkyl, aryl,

heterocyclyl, heterocyclylalkylene, alkylheterocyclylalkylene, aryloxyalkylene, alkoxyarylene, alkylaryloxyalkylene, alkylcarbonyl, alkoxycarbonyl, aralkoxycarbonyl, alkylamino and alkoxycarbonylamino; wherein said aryl,

95 heterocyclylalkylene and aryloxyalkylene radicals may be optionally substituted with one or more radicals independently selected from halogen, alkyl and alkoxy; and

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R^2 is R^{200}-cycloalkyl-R^{201} wherein:
100
              R<sup>200</sup> is selected from:
              - (CR<sup>202</sup>R<sup>203</sup>)<sub>v</sub>-;
              -C(0)-;
              -C(O)-(CH<sub>2</sub>),-;
              -C(O)-O-(CH<sub>2</sub>)<sub>y</sub>-;
105
              -(CH_2)_v-C(O)-;
              -O-(CH_2)_v-C(O)-;
              -NR^{202}-;
              -NR^{202}-(CH_2)_{v}-;
              -(CH_2)_v - NR^{202} - i
              -(CH_2)_v-NR^{202}-(CH_2)_z-;
110
              -(CH_2)_V - C(O) - NR^{202} - (CH_2)_V - ;
              -(CH_2)_v-NR^{202}-C(O)-(CH_2)_z-;
              -(CH_2)_v - NR^{202} - C(O) - NR^{203} - (CH_2)_z - ;
              -S(0)_{x}-(CR^{202}R^{203})_{y}-;
              - (CR^{202}R^{203})_v-S (O) x-;
115
              -S(O)_{x}-(CR^{202}R^{203})_{y}-O-;
              -S(O)_{x}-(CR^{202}R^{203})_{y}-C(O)-;
              -O-(CH<sub>2</sub>)<sub>v</sub>-;
              - (CH<sub>2</sub>)<sub>v</sub>-O-;
120
              -S-; and
              -0-;
              R^{201} represents one or more radicals selected from
       the group consisting of hydrido, halogen, hydroxy,
       carboxy, keto, alkyl, hydroxyalkyl, haloalkyl,
       cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl,
125
       aralkyl, heterocyclylalkylene, alkylcarbonyl,
       hydroxyalkylcarbonyl, cycloalkylcarbonyl, arylcarbonyl,
       haloarylcarbonyl, alkoxy, alkoxyalkylene, alkoxyarylene,
       alkoxycarbonyl, carboxyalkylcarbonyl,
130
       alkoxyalkylcarbonyl, heterocyclylalkylcarbonyl,
       alkylsulfonyl, alkylsulfonylalkylene, amino, aminoalkyl,
       alkylamino, aralkylamino, alkylaminoalkylene,
       aminocarbonyl, alkylcarbonylamino,
       alkylcarbonylaminoalkylene, alkylaminoalkylcarbonyl,
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alkylaminoalkylcarbonylamino,
aminoalkylcarbonylaminoalkyl, alkoxycarbonylamino,
alkoxyalkylcarbonylamino, alkoxycarbonylaminoalkylene,
alkylimidocarbonyl, amidino, alkylamidino,
aralkylamidino, guanidino, guanidinoalkylene, and
alkylsulfonylamino; and

 \mbox{R}^{202} and \mbox{R}^{203} are independently selected from hydrido, alkyl, aryl and aralkyl; and

y and z are independently 0, 1, 2, 3, 4, 5 or 6 wherein y + z is less than or equal to 6; and

145 x is 0, 1 or 2; and

R³ is selected from pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylamino,

150

wherein the R^3 pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylakyl, thiazolylamino,

155

160

groups may be optionally substituted with one or more radicals independently selected from halo, keto, alkyl, aralkyl, aralkenyl, arylheterocyclyl, carboxy, carboxyalkyl, alkoxy, aryloxy, alkylthio, arylthio, alkylsulfinyl, arylsulfinyl, alkylsulfonyl, arylsulfonyl, aralkoxy, heterocyclylalkoxy, amino, alkylamino, alkynylamino, cycloalkylamino, cycloalkenylamino, arylamino, haloarylamino, heterocyclylamino, aminocarbonyl, cyano, hydroxy,

hydroxyalkyl, alkoxyalkylene, alkenoxyalkylene, aryloxyalkyl, alkoxyalkylamino, alkylaminoalkoxy, alkoxycarbonyl, aryloxycarbonyl, heterocyclyloxycarbonyl, alkoxycarbonylamino, alkoxyarylamino, alkoxyaralkylamino, aminosulfinyl, aminosulfonyl, alkylsulfonylamino,

alkylaminoalkylamino, hydroxyalkylamino, aralkylamino, aryl(hydroxyalkyl)amino, alkylaminoalkylaminoalkylamino, alkylheterocyclylamino, heterocyclylalkylamino, alkylheterocyclylalkylamino, aralkylheterocyclylamino, heterocyclylalkylamino,

alkoxycarbonylheterocyclylamino, nitro,
alkylaminocarbonyl, alkylcarbonylamino,
haloalkylsulfonyl, aminoalkyl, haloalkyl, alkylcarbonyl,
hydrazinyl, alkylhydrazinyl, arylhydrazinyl, and -NR⁴⁴R⁴⁵
wherein R⁴⁴ is alkylcarbonyl or amino, and R⁴⁵ is alkyl or
aralkyl; and

 R^4 is selected from hydrido, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein R^4 is optionally substituted with one or more radicals independently selected from halo, alkyl, alkenyl,

alkynyl, aryl, heterocyclyl, alkylthio, arylthio, alkylthioalkylene, arylthioalkylene, alkylsulfinyl, alkylsulfinylalkylene, arylsulfinylalkylene, alkylsulfonyl, alkylsulfonylalkylene, arylsulfonylalkylene, arylsulfonylalkylene, alkoxy, aryloxy, aralkoxy,

aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, alkoxycarbonyl, aryloxycarbonyl, haloalkyl, amino, cyano, nitro, alkylamino, arylamino, alkylaminoalkylene, arylaminoalkylene, aminoalkylamino, and hydroxy;

provided R³ is not 2-pyridinyl when R⁴ is a phenyl 195 ring containing a 2-hydroxy substituent and when R¹ is hydrido; and

further provided that R^4 is not methylsulfonylphenyl or aminosulfonylphenyl; and

further provided that R^1 is not methylsulfonylphenyl; or

200

a pharmaceutically-acceptable salt or tautomer thereof.

127. A compound of Formula IA

wherein

R¹ is selected from hydrido, hydroxy, alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl, heterocyclyl, cycloalkylalkylene, cycloalkenylalkylene, heterocyclylalkylene, haloalkyl, haloalkenyl, haloalkynyl, hydroxyalkyl, hydroxyalkenyl,

hydroxyalkynyl, aralkyl, aralkenyl, aralkynyl, arylheterocyclyl, carboxy, carboxyalkyl, alkoxyalkyl, alkenoxyalkyl, alkoxyalkyl, aryloxyalkyl, alkoxyaryl, heterocyclyloxyalkyl, alkoxyalkoxy, mercaptoalkyl, alkylthioalkylene, alkenylthioalkylene,

alkylthioalkenylene, amino, aminoalkyl, alkylamino, alkenylamino, alkynylamino, arylamino, heterocyclylamino, alkylsulfinyl, alkenylsulfinyl, alkynylsulfinyl, arylsulfinyl, heterocyclylsulfinyl, alkylsulfonyl, alkenylsulfonyl, alkynylsulfonyl, arylsulfonyl,

heterocyclylsulfonyl, alkylaminoalkylene, alkylsulfonylalkylene, acyl, acyloxycarbonyl, alkoxycarbonylalkylene, aryloxycarbonylalkylene, heterocyclyloxycarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, heterocyclyloxycarbonylarylene,

alkylcarbonylalkylene, arylcarbonylalkylene, heterocyclylcarbonylalkylene, alkylcarbonylarylene, arylcarbonylarylene, heterocyclylcarbonylarylene,

40

45

alkylcarbonyloxyalkylene, arylcarbonyloxyalkylene, heterocyclylcarbonyloxyalkylene, alkylcarbonyloxyarylene, arylcarbonyloxyarylene, and heterocyclylcarbonyloxyarylene; or

R1 has the formula

wherein:

i is an integer from 0 to 9;

R²⁵ is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkylcarbonylalkylene, arylcarbonylalkylene, and heterocyclylcarbonylaminoalkylene; and

R²⁶ is selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkylalkylene, aralkyl, alkoxycarbonylalkylene, and alkylaminoalkyl; and

R²⁷ is selected from alkyl, cycloalkyl, alkynyl, aryl, heterocyclyl, aralkyl, cycloalkylalkylene, cycloalkenylalkylene, cycloalkylarylene, cycloalkylcycloalkyl, heterocyclylalkylene, alkylarylene, alkylaralkyl, aralkylarylene, alkylheterocyclyl, alkylheterocyclylalkylene, alkylheterocyclylarylene,

aralkylheterocyclyl, alkoxyalkylene, alkoxyarylene, alkoxyaralkyl, alkoxyheterocyclyl, alkoxyalkoxyarylene, aryloxyarylene, aralkoxyarylene, alkoxyheterocyclylalkylene, aryloxyalkoxyarylene, alkoxycarbonylalkylene, alkoxycarbonylheterocyclyl,

alkoxycarbonylheterocyclylcarbonylalkylene, aminoalkyl, alkylaminoalkylene, arylaminocarbonylalkylene, alkoxyarylaminocarbonylalkylene, aminocarbonylalkylene, arylaminocarbonylalkylene, alkylaminocarbonylalkylene, arylcarbonylalkylene, alkoxycarbonylarylene,

60 aryloxycarbonylarylene, alkylaryloxycarbonylarylene,

85

90

arylcarbonylarylene, alkylarylcarbonylarylene,
alkoxycarbonylalkoxylarylene,
alkoxycarbonylalkoxylarylene,
heterocyclylcarbonylalkylarylene, alkylthioalkylene,
cycloalkylthioalkylene, alkylthioarylene,
aralkylthioarylene, heterocyclylthioarylene,
arylthioalklylarylene, arylsulfonylaminoalkylene,
alkylsulfonylarylene, alkylaminosulfonylarylene; wherein
said alkyl, cycloalkyl, aryl, heterocyclyl, aralkyl,
heterocyclylalkylene, alkylheterocyclylarylene,
alkoxyarylene, aryloxyarylene, arylaminocarbonylalkylene

alkoxyarylene, aryloxyarylene, arylaminocarbonylalkylene, aryloxycarbonylarylene, arylcarbonylarylene, alkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, and alkylsulfonylarylene groups may be optionally substituted with one or more radicals independently selected from alkyl, halo, haloalkyl, alkoxy, keto, amino, nitro, and cyano; or

R²⁷ is -CHR²⁸R²⁹ wherein R²⁸ is alkoxycarbonyl, and R²⁹ is selected from aralkyl, aralkoxyalkylene, heterocyclylalkylene, alkylheterocyclylalkylene, alkoxycarbonylalkylene, alkylthioalkylene, and aralkylthioalkylene; wherein said aralkyl and heterocylcyl groups may be optionally substituted with one or more radicals independently selected from alkyl and nitro; or

R²⁶ and R²⁷ together with the nitrogen atom to which they are attached form a heterocycle, wherein said heterocycle is optionally substituted with one or more radicals independently selected from alkyl, aryl, heterocyclyl, heterocyclylalkylene, alkylheterocyclylalkylene, aryloxyalkylene, alkoxyarylene, alkylaryloxyalkylene, alkylcarbonyl, alkoxycarbonyl, aralkoxycarbonyl, alkylamino and

heterocyclylalkylene and aryloxyalkylene radicals may be optionally substituted with one or more radicals

alkoxycarbonylamino; wherein said aryl,

independently selected from halogen, alkyl and alkoxy; and

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R^2 is R^{200}-aryl-R^{201} wherein:
100
               R<sup>200</sup> is selected from:
               - (CR<sup>202</sup>R<sup>203</sup>),-;
               -C(0) -;
               -C(O) - (CH_2)_y - ;
               -C(O) -O-(CH_2)_{v}-;
105
               -(CH_2)_v-C(O)-;
               -O-(CH_2)_v-C(O)-;
               -NR<sup>202</sup>-:
               -NR^{202} - (CH_2)_{v} - ;
               -(CH_2)_{v}-NR^{300}-;
               -(CH_2)_v-NR^{202}-(CH_2)_{z1}-;
110
               -(CH_2)_v-C(O)-NR^{202}-(CH_2)_v-;
               -(CH<sub>2</sub>)_v-NR<sup>202</sup>-C(O)-(CH<sub>2</sub>)_z-;
               -(CH<sub>2</sub>)<sub>v</sub>-NR<sup>202</sup>-C(O)-NR<sup>203</sup>-(CH<sub>2</sub>)<sub>v</sub>-;
               -S(0)_{x}-(CR^{202}R^{203})_{y}-;
115
               -(CR^{202}R^{203})_{v}-S(O)_{x}-;
               -S(0)_{x}-(CR^{202}R^{203})_{y}-O-;
               -S(O)_{x}-(CR^{202}R^{203})_{y}-C(O)-;
               -O-(CH<sub>2</sub>),-;
               -(CH_2)_v-O-; and
120
               -0-;
               R^{201} represents one or more radicals selected from
        the group consisting of hydrido, halogen, hydroxy,
        carboxy, keto, alkyl, hydroxyalkyl, haloalkyl,
        cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl,
125
        aralkyl, heterocyclylalkylene, alkylcarbonyl,
        hydroxyalkylcarbonyl, cycloalkylcarbonyl, arylcarbonyl,
       haloarylcarbonyl, alkoxy, alkoxyalkylene, alkoxyarylene,
        alkoxycarbonyl, carboxyalkylcarbonyl,
        alkoxyalkylcarbonyl, heterocyclylalkylcarbonyl,
       alkylsulfonyl, alkylsulfonylalkylene, amino, aminoalkyl,
130
        alkylamino, aralkylamino, alkylaminoalkylene,
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aminocarbonyl, alkylcarbonylamino,

alkylcarbonylaminoalkylcarbonyl, alkylaminoalkylcarbonylamino,

aminoalkylcarbonylaminoalkyl, alkoxycarbonylamino, alkoxyalkylcarbonylamino, alkoxycarbonylaminoalkylene, alkylimidocarbonyl, amidino, alkylamidino, aralkylamidino, guanidino, guanidinoalkylene, and alkylsulfonylamino; and

 R^{202} and R^{203} are independently selected from hydrido, alkyl, aryl and aralkyl; and

R³⁰⁰ is selected from alkyl, aryl and aralkyl; and
y and z are independently 0, 1, 2, 3, 4, 5 or 6
wherein y + z; and yl is 1, 2, 3, 4, 5 or 6; wherein y +
z and yl + z are less than or equal to 6; and

x is 0, 1 or 2; and

R³ is selected from pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylalkyl, thiazolylamino,

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140

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wherein the R³ pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylakyl, thiazolylamino,

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160

groups may be optionally substituted with one or more radicals independently selected from halo, keto, alkyl, aralkyl, aralkenyl, arylheterocyclyl, carboxy, carboxyalkyl, alkoxy, aryloxy, alkylthio, arylthio, alkylsulfinyl, arylsulfinyl, alkylsulfonyl, arylsulfonyl, aralkoxy, heterocyclylalkoxy, amino, alkylamino,

aralkyl; and

alkenylamino, alkynylamino, cycloalkylamino,
 cycloalkenylamino, arylamino, haloarylamino,
 heterocyclylamino, aminocarbonyl, cyano, hydroxy,
 hydroxyalkyl, alkoxyalkylene, alkenoxyalkylene,

aryloxyalkyl, alkoxyalkylamino, alkylaminoalkoxy, alkoxycarbonyl, aryloxycarbonyl, heterocyclyloxycarbonyl, alkoxycarbonylamino, alkoxyarylamino, alkoxyaralkylamino,

aminosulfinyl, aminosulfonyl, alkylsulfonylamino, alkylaminoalkylamino, hydroxyalkylamino, aralkylamino, aryl(hydroxyalkyl)amino, alkylaminoalkylaminoalkylamino, alkylheterocyclylamino, heterocyclylalkylamino, alkylheterocyclylalkylamino, aralkylheterocyclylalkylamino,

heterocyclylaterocyclylalkylamino,
alkoxycarbonylheterocyclylamino, nitro,
alkylaminocarbonyl, alkylcarbonylamino,
haloalkylsulfonyl, aminoalkyl, haloalkyl, alkylcarbonyl,
hydrazinyl, alkylhydrazinyl, arylhydrazinyl, and -NR⁴⁴R⁴⁵
wherein R⁴⁴ is alkylcarbonyl or amino, and R⁴⁵ is alkyl or

 R^4 is selected from hydrido, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein R^4 is optionally substituted with one or more radicals

- independently selected from halo, alkyl, alkenyl, alkynyl, aryl, heterocyclyl, alkylthio, arylthio, alkylthioalkylene, arylthioalkylene, alkylsulfinyl, alkylsulfinylalkylene, arylsulfinylalkylene, alkylsulfonyl, alkylsulfonylalkylene,
- arylsulfonylalkylene, alkoxy, aryloxy, aralkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, alkoxycarbonyl, aryloxycarbonyl, haloalkyl, amino, cyano, nitro, alkylamino, arylamino, alkylaminoalkylene, arylaminoalkylene, aminoalkylamino, and hydroxy;
- provided R³ is not 2-pyridinyl when R⁴ is a phenyl ring containing a 2-hydroxy substituent and when R¹ is hydrido; and

further provided that R4 is not methylsulfonylphenyl

or aminosulfonylphenyl; and

further provided that R¹ is not methylsulfonylphenyl; or

a pharmaceutically-acceptable salt or tautomer thereof.

128. A compound of Formula IA

wherein

R¹ is selected from hydrido, hydroxy, alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl, heterocyclyl, cycloalkylalkylene, cycloalkenylalkylene, heterocyclylalkylene, haloalkyl, haloalkenyl, haloalkynyl, hydroxyalkyl, hydroxyalkenyl,

- hydroxyalkynyl, aralkyl, aralkenyl, aralkynyl, arylheterocyclyl, carboxy, carboxyalkyl, alkoxyalkyl, alkenoxyalkyl, alkynoxyalkyl, aryloxyalkyl, alkoxyaryl, heterocyclyloxyalkyl, alkoxyalkoxy, mercaptoalkyl, alkylthioalkylene, alkenylthioalkylene,
- alkylthioalkenylene, amino, aminoalkyl, alkylamino, alkenylamino, alkynylamino, arylamino, heterocyclylamino, alkylsulfinyl, alkenylsulfinyl, alkynylsulfinyl, arylsulfinyl, heterocyclylsulfinyl, alkylsulfonyl, alkenylsulfonyl, alkynylsulfonyl, arylsulfonyl,
- heterocyclylsulfonyl, alkylaminoalkylene, alkylsulfonylalkylene, acyl, acyloxycarbonyl, alkoxycarbonylalkylene, aryloxycarbonylalkylene, heterocyclyloxycarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, heterocyclyloxycarbonylarylene,

alkylcarbonylalkylene, arylcarbonylalkylene,
heterocyclylcarbonylalkylene, alkylcarbonylarylene,
arylcarbonylarylene, heterocyclylcarbonylarylene,
alkylcarbonyloxyalkylene, arylcarbonyloxyalkylene,
heterocyclylcarbonyloxyalkylene, alkylcarbonyloxyarylene,
arylcarbonyloxyarylene, and
heterocyclylcarbonyloxyarylene; or

 R^{1} has the formula

$$\begin{array}{c|c}
 & R^{25} & O & R^{26} \\
 & C & CH_2)_1 - C & N & R^{27} \\
 & H & R^{27} & (II)
\end{array}$$

wherein:

i is an integer from 0 to 9;

R²⁵ is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkylcarbonylalkylene, arylcarbonylalkylene, and heterocyclylcarbonylaminoalkylene; and

R²⁶ is selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkylalkylene, aralkyl, alkoxycarbonylalkylene, and alkylaminoalkyl; and

R²⁷ is selected from alkyl, cycloalkyl, alkynyl, aryl, heterocyclyl, aralkyl, cycloalkylalkylene,

cycloalkenylalkylene, cycloalkylarylene, cycloalkylcycloalkyl, heterocyclylalkylene, alkylarylene, alkylaralkyl, aralkylarylene, alkylheterocyclyl, alkylheterocyclylalkylene, alkylheterocyclylarylene,

aralkylheterocyclyl, alkoxyalkylene, alkoxyarylene, alkoxyaralkyl, alkoxyheterocyclyl, alkoxyalkoxyarylene, aryloxyarylene, aralkoxyarylene,

alkoxyheterocyclylalkylene, aryloxyalkoxyarylene, alkoxycarbonylalkylene, alkoxycarbonylheterocyclyl,

alkoxycarbonylheterocyclylcarbonylalkylene, aminoalkyl, alkylaminoalkylene, arylaminocarbonylalkylene, alkoxyarylaminocarbonylalkylene, aminocarbonylalkylene,

arylaminocarbonylalkylene, alkylaminocarbonylalkylene, arylcarbonylalkylene, alkoxycarbonylarylene,

- aryloxycarbonylarylene, alkylaryloxycarbonylarylene, arylcarbonylarylene, alkylarylcarbonylarylene, alkoxycarbonylheterocyclylarylene, alkoxycarbonylalkoxylarylene, heterocyclylcarbonylalkylarylene, alkylthioalkylene,
- cycloalkylthioalkylene, alkylthioarylene, aralkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, arylsulfonylaminoalkylene, alkylsulfonylarylene, alkylaminosulfonylarylene; wherein said alkyl, cycloalkyl, aryl, heterocyclyl, aralkyl,
- heterocyclylalkylene, alkylheterocyclylarylene, alkoxyarylene, aryloxyarylene, arylaminocarbonylalkylene, aryloxycarbonylarylene, arylcarbonylarylene, alkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, and alkylsulfonylarylene groups may be optionally substituted with one or more radicals

independently selected from alkyl, halo, haloalkyl, alkoxy, keto, amino, nitro, and cyano; or $R^{27} \text{ is -CHR}^{28}R^{29} \text{ wherein } R^{28} \text{ is alkoxycarbonyl, and } R^{29}$

is selected from aralkyl, aralkoxyalkylene,
heterocyclylalkylene, alkylheterocyclylalkylene,
alkoxycarbonylalkylene, alkylthioalkylene, and
aralkylthioalkylene; wherein said aralkyl and
heterocylcyl groups may be optionally substituted with
one or more radicals independently selected from alkyl
and nitro; or

 R^{26} and R^{27} together with the nitrogen atom to which they are attached form a heterocycle, wherein said heterocycle is optionally substituted with one or more radicals independently selected from alkyl, aryl,

heterocyclyl, heterocyclylalkylene, alkylheterocyclylalkylene, aryloxyalkylene, alkoxyarylene, alkylaryloxyalkylene, alkylcarbonyl, alkoxycarbonyl, aralkoxycarbonyl, alkylamino and

alkoxycarbonylamino; wherein said aryl, 95 heterocyclylalkylene and aryloxyalkylene radicals may be optionally substituted with one or more radicals independently selected from halogen, alkyl and alkoxy; and R^2 is R^{200} -heterocyclyl- R^{201} wherein: 100 R²⁰⁰ is selected from: $-(CR^{301}R^{302})_{v}-;$ $-C(0) - (CH_2)_{v1} - ;$ -C(O)-O-(CH₂)_v-; $-(CH_2)_v-C(O)-;$ 105 $-O-(CH_2)_v-C(O)-;$ $-NR^{303}-;$ $-NR^{303} - (CH_2)_v - ;$ $-(CH_2)_{v1}-NR^{202}-;$ $-(CH_2)_y-NR^{202}-(CH_2)_{z1}-;$ $-(CH_2)_v-C(O)-NR^{202}-(CH_2)_z-;$ 110 - (CH $_2$) $_{
m v}$ -NR 202 -C(O) - (CH $_2$) $_{
m z}$ -; $-(CH_2)_v - NR^{202} - C(O) - NR^{203} - (CH_2)_z - ;$ $-S(O)_{x}-(CR^{202}R^{203})_{y}-;$ $-(CR^{202}R^{203})_y-S(0)_x-;$ 115 $-S(O)_{x}-(CR^{202}R^{203})_{y}-O-;$ $-S(0)_{x}-(CR^{202}R^{203})_{y}-C(0)-;$ $-0-(CH_2)_{v}-;$ and - (CH₂)_v-O-; ${\bf R}^{{\bf 201}}$ represents one or more radicals selected from the group consisting of hydrido, halogen, hydroxy, 120 carboxy, keto, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, aralkyl, heterocyclylalkylene, alkylcarbonyl, hydroxyalkylcarbonyl, cycloalkylcarbonyl, arylcarbonyl,

haloarylcarbonyl, alkoxy, alkoxyalkylene, alkoxyarylene, alkoxycarbonyl, carboxyalkylcarbonyl, alkoxyalkylcarbonyl, heterocyclylalkylcarbonyl, alkylsulfonyl, alkylsulfonylalkylene, amino, aminoalkyl, alkylamino, aralkylamino, alkylaminoalkylene,

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150

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aminocarbonyl, alkylcarbonylamino,
alkylcarbonylaminoalkylene, alkylaminoalkylcarbonyl,
alkylaminoalkylcarbonylamino,
aminoalkylcarbonylaminoalkyl, alkoxycarbonylamino,
alkoxyalkylcarbonylamino, alkoxycarbonylaminoalkylene,
alkylimidocarbonyl, amidino, alkylamidino,
aralkylamidino, guanidino, guanidinoalkylene, and
alkylsulfonylamino; and

 ${\rm R}^{202}$ and ${\rm R}^{203}$ are independently selected from hydrido, alkyl, aryl and aralkyl; and

 \mathbb{R}^{301} and \mathbb{R}^{302} are independently selected from aryl and aralkyl; and

R³⁰³ is selected from alkyl, aryl and aralkyl; and y and z are independently 0, 1, 2, 3, 4, 5 or 6; and yl is 1, 2, 3, 4, 5 or 6; wherein y + z and yl + z are less than or equal to 6; and

x is 0, 1 or 2; wherein either x or y is other than 0 when R^{200} is $-S(O)_x-(CR^{202}R^{203})_y-$; and

R³ is selected from pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylakyl, thiazolylamino,

$$\begin{pmatrix} 1 \\ 1 \\ 0 \end{pmatrix}$$
; and $\begin{pmatrix} 1 \\ 1 \\ 0 \end{pmatrix}$

wherein the R³ pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylalkyl, thiazolylamino,

groups may be optionally substituted with one or more radicals independently selected from halo, keto, alkyl,

- aralkyl, aralkenyl, arylheterocyclyl, carboxy, carboxyalkyl, alkoxy, aryloxy, alkylthio, arylthio, alkylsulfinyl, arylsulfinyl, alkylsulfonyl, arylsulfonyl, aralkoxy, heterocyclylalkoxy, amino, alkylamino, alkenylamino, alkynylamino, cycloalkylamino,
- cycloalkenylamino, arylamino, haloarylamino, heterocyclylamino, aminocarbonyl, cyano, hydroxy, hydroxyalkyl, alkoxyalkylene, alkenoxyalkylene, aryloxyalkyl, alkoxyalkylamino, alkylaminoalkoxy, alkoxycarbonyl, aryloxycarbonyl, heterocyclyloxycarbonyl,
- alkoxycarbonylamino, alkoxyarylamino, alkoxyaralkylamino, aminosulfinyl, aminosulfonyl, alkylsulfonylamino, alkylaminoalkylamino, hydroxyalkylamino, aralkylamino, aryl(hydroxyalkyl)amino, alkylaminoalkylaminoalkylamino, alkylheterocyclylamino, heterocyclylalkylamino,
- alkylheterocyclylalkylamino, aralkylheterocyclylamino, heterocyclylheterocyclylalkylamino, alkoxycarbonylheterocyclylamino, nitro, alkylaminocarbonyl, alkylcarbonylamino, haloalkylsulfonyl, aminoalkyl, haloalkyl, alkylcarbonyl,
- 180 hydrazinyl, alkylhydrazinyl, arylhydrazinyl, and -NR 44 R 45 wherein R 44 is alkylcarbonyl or amino, and R 45 is alkyl or aralkyl; and

 ${\rm R}^4$ is selected from hydrido, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein

- R⁴ is optionally substituted with one or more radicals independently selected from halo, alkyl, alkenyl, alkynyl, aryl, heterocyclyl, alkylthio, arylthio, alkylthioalkylene, arylthioalkylene, alkylsulfinyl, alkylsulfinylalkylene, arylsulfinylalkylene,
- alkylsulfonyl, alkylsulfonylalkylene, arylsulfonylalkylene, alkoxy, aryloxy, aralkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, alkoxycarbonyl, aryloxycarbonyl, haloalkyl, amino, cyano, nitro, alkylamino, arylamino, alkylaminoalkylene,
- 195 arylaminoalkylene, aminoalkylamino, and hydroxy;

or

provided R^3 is not 2-pyridinyl when R^4 is a phenyl ring containing a 2-hydroxy substituent and when R^1 is hydrido; and

further provided R² is selected from aryl,
200 heterocyclyl, unsubstituted cycloalkyl and cycloalkenyl
when R⁴ is hydrido; and

further provided that R^4 is not methylsulfonylphenyl or aminosulfonylphenyl; and

further provided that R1 is not methylsulfonylphenyl;

a pharmaceutically-acceptable salt or tautomer thereof.

129. A compound of Formula IA

wherein

R1 is selected from hydrido, hydroxy, alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl, heterocyclyl, cycloalkylalkylene, cycloalkenylalkylene, heterocyclylalkylene, haloalkyl, haloalkenyl, haloalkynyl, hydroxyalkyl, hydroxyalkenyl,

- hydroxyalkynyl, aralkyl, aralkenyl, aralkynyl, arylheterocyclyl, carboxy, carboxyalkyl, alkoxyalkyl, alkenoxyalkyl, alkynoxyalkyl, aryloxyalkyl, alkoxyaryl, heterocyclyloxyalkyl, alkoxyalkoxy, mercaptoalkyl, alkylthioalkylene, alkenylthioalkylene,
- alkylthioalkenylene, amino, aminoalkyl, alkylamino, alkenylamino, alkynylamino, arylamino, heterocyclylamino, alkylsulfinyl, alkenylsulfinyl, alkynylsulfinyl,

arylsulfinyl, heterocyclylsulfinyl, alkylsulfonyl, alkenylsulfonyl, alkynylsulfonyl, arylsulfonyl,

- heterocyclylsulfonyl, alkylaminoalkylene, alkylsulfonylalkylene, acyl, acyloxycarbonyl, alkoxycarbonylalkylene, aryloxycarbonylalkylene, heterocyclyloxycarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, heterocyclyloxycarbonylarylene,
- alkylcarbonylalkylene, arylcarbonylalkylene,
 heterocyclylcarbonylalkylene, alkylcarbonylarylene,
 arylcarbonylarylene, heterocyclylcarbonylarylene,
 alkylcarbonyloxyalkylene, arylcarbonyloxyalkylene,
 heterocyclylcarbonyloxyalkylene, alkylcarbonyloxyarylene,
- 30 arylcarbonyloxyarylene, and
 heterocyclylcarbonyloxyarylene; or

R1 has the formula

wherein:

i is an integer from 0 to 9;

R²⁵ is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkylcarbonylalkylene, arylcarbonylalkylene, and heterocyclylcarbonylaminoalkylene; and

R²⁶ is selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkylalkylene, aralkyl, alkoxycarbonylalkylene, and alkylaminoalkyl; and

R²⁷ is selected from alkyl, cycloalkyl, alkynyl,
aryl, heterocyclyl, aralkyl, cycloalkylalkylene,
cycloalkenylalkylene, cycloalkylarylene,
cycloalkylcycloalkyl, heterocyclylalkylene, alkylarylene,
alkylaralkyl, aralkylarylene, alkylheterocyclyl,
alkylheterocyclylalkylene, alkylheterocyclylarylene,
aralkylheterocyclyl, alkoxyalkylene, alkoxyarylene,

alkoxyaralkyl, alkoxyheterocyclyl, alkoxyalkoxyarylene, aryloxyarylene, aralkoxyarylene, alkoxyheterocyclylalkylene, aryloxyalkoxyarylene, alkoxycarbonylalkylene, alkoxycarbonylheterocyclyl, alkoxycarbonylheterocyclylcarbonylalkylene, aminoalkyl,

alkoxycarbonylheterocyclylcarbonylalkylene, aminoalkyl, alkylaminoalkylene, arylaminocarbonylalkylene, alkoxyarylaminocarbonylalkylene, aminocarbonylalkylene, arylaminocarbonylalkylene, alkylaminocarbonylalkylene, arylcarbonylalkylene, alkoxycarbonylarylene,

aryloxycarbonylarylene, alkylaryloxycarbonylarylene, arylcarbonylarylene, alkylarylcarbonylarylene, alkoxycarbonylheterocyclylarylene, alkoxycarbonylalkoxylarylene, heterocyclylcarbonylalkylarylene, alkylthioalkylene,

cycloalkylthioalkylene, alkylthioarylene, aralkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, arylsulfonylaminoalkylene, alkylsulfonylarylene, alkylaminosulfonylarylene; wherein said alkyl, cycloalkyl, aryl, heterocyclyl, aralkyl,

heterocyclylalkylene, alkylheterocyclylarylene, alkoxyarylene, aryloxyarylene, arylaminocarbonylalkylene, aryloxycarbonylarylene, arylcarbonylarylene, alkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, and alkylsulfonylarylene groups
may be optionally substituted with one or more radicals

independently selected from alkyl, halo, haloalkyl, alkoxy, keto, amino, nitro, and cyano; or $R^{27} \text{ is -CHR}^{28}R^{29} \text{ wherein } R^{28} \text{ is alkoxycarbonyl, and } R^{29}$

is selected from aralkyl, aralkoxyalkylene,
heterocyclylalkylene, alkylheterocyclylalkylene,
alkoxycarbonylalkylene, alkylthioalkylene, and
aralkylthioalkylene; wherein said aralkyl and
heterocylcyl groups may be optionally substituted with
one or more radicals independently selected from alkyl

85 and nitro; or

80

 ${\ensuremath{\mathbb{R}}}^{26}$ and ${\ensuremath{\mathbb{R}}}^{27}$ together with the nitrogen atom to which

they are attached form a heterocycle, wherein said heterocycle is optionally substituted with one or more radicals independently selected from alkyl, aryl,

- heterocyclyl, heterocyclylalkylene, alkylheterocyclylalkylene, aryloxyalkylene, alkoxyarylene, alkylaryloxyalkylene, alkylcarbonyl, alkoxycarbonyl, aralkoxycarbonyl, alkylamino and alkoxycarbonylamino; wherein said aryl,
- heterocyclylalkylene and aryloxyalkylene radicals may be optionally substituted with one or more radicals independently selected from halogen, alkyl and alkoxy; and
- R² is selected from hydrido, halogen, mercapto,
 alkyl, alkenyl, alkynyl, aryl, heterocyclyl, haloalkyl,
 hydroxyalkyl, aralkyl, alkylheterocyclyl,
 heterocyclylalkyl, heterocyclylheterocyclyl,
 heterocyclylalkylheterocyclyl, alkylamino, alkenylamino,
 alkynylamino, arylamino, aryl(hydroxyalkyl)amino,
- heterocyclylamino, heterocyclylalkylamino, aralkylamino, N-alkyl-N-alkynyl-amino, aminoalkyl, aminoaryl, aminoalkylamino, aminocarbonylalkylene, arylaminoalkylene, alkylaminoalkylene, arylaminoarylene, alkylaminoalkylamino,
- alkylcarbonylaminoalkylene,
 aminoalkylcarbonylaminoalkylene,
 alkylaminoalkylcarbonylamino, cycloalkyl, cycloalkenyl,
 aminoalkylthio, alkylaminocarbonylalkylthio,
 alkylaminoalkylaminocarbonylalkylthio, alkoxy,
- heterocyclyloxy, alkylthio, cyanoalkylthio, alkenylthio, alkynylthio, carboxyalkylthio, arylthio, heterocyclylthio, alkoxycarbonylalkylthio, alkylsulfinyl, alkylsulfonyl, carboxy, carboxyalkyl, alkoxyalkyl, alkoxyalkylthio, carboxycycloalkyl, carboxycycloalkenyl,
- carboxyalkylamino, alkoxycarbonyl, heterocyclylcarbonyl, alkoxycarbonylalkyl, alkoxycarbonylalkylamino, alkoxycarbonylheterocyclyl,

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alkoxycarbonylheterocyclylcarbonyl, alkoxyalkylamino,
        alkoxycarbonylaminoalkylene, alkoxycarbonylaminoalkoxy,
        alkoxycarbonylaminoalkylamino, heterocyclylsulfonyl,
 125
        aralkythio, heterocyclylalkylthio, aminoalkoxy,
        cyanoalkoxy, carboxyalkoxy, aryloxy, aralkoxy,
        alkenyloxy, alkynyloxy, and heterocyclylalkyloxy; wherein
       the aryl, heterocyclyl, heterocyclylalkyl, cycloalkyl and
130
       cycloalkenyl groups may be optionally substituted with
       one or more radicals independently selected from halo,
       keto, amino, alkyl, alkenyl, alkynyl, aryl, heterocyclyl,
       aralkyl, heterocyclylalkyl, epoxyalkyl,
       amino(hydroxyalkyl) carboxy, alkoxy, aryloxy, aralkoxy,
135
       haloalkyl, alkylamino, alkynylamino,
       alkylaminoalkylamino, heterocyclylalkylamino,
       alkylcarbonyl, alkoxycarbonyl, alkylsulfonyl,
       arylsulfonyl, and aralkylsulfonyl; or
             R^2 is R^{200}-heterocyclyl-R^{201}, R^{200}-aryl-R^{201}, or R^{200}-
140
       cycloalkyl-R201 wherein:
             R<sup>200</sup> is selected from:
             - (CR202R203),-;
             -C(O)-;
             -C(0) - (CH<sub>2</sub>)<sub>v</sub> -;
             -C(O)-O-(CH<sub>2</sub>)<sub>v</sub>-;
145
             -(CH_2)_v-C(0)-;
             -O-(CH_2)_v-C(O)-;
             -NR^{202}-;
             -NR^{202} - (CH_2)_v - ;
150
             -(CH_2)_v - NR^{202} - ;
             -(CH_2)_v-NR^{202}-(CH_2)_z-;
             -(CH_2)_v-C(O)-NR^{202}-(CH_2)_z-;
             -(CH_2)_v-NR^{202}-C(O)-(CH_2)_z-;
             -(CH_2)_v-NR^{202}-C(O)-NR^{203}-(CH_2)_z-;
155
             -S(O)_{x}-(CR^{202}R^{203})_{y}-;
             -(CR^{202}R^{203})_{v}-S(0)_{x}-;
             -S(O)_{x}-(CR^{202}R^{203})_{y}-O-;
             -S(O)_{x}-(CR^{202}R^{203})_{y}-C(O)-;
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-O-(CH_2)_{v}-;
160
           -(CH_2)_v-O-;
           -S-;
           -0-;
           or R<sup>200</sup> represents a bond;
           R^{201} represents one or more radicals selected from
165
      the group consisting of hydrido, halogen, hydroxy,
      carboxy, keto, alkyl, hydroxyalkyl, haloalkyl,
      cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl,
      aralkyl, heterocyclylalkylene, alkylcarbonyl,
      hydroxyalkylcarbonyl, cycloalkylcarbonyl, arylcarbonyl,
170
      haloarylcarbonyl, alkoxy, alkoxyalkylene, alkoxyarylene,
      alkoxycarbonyl, carboxyalkylcarbonyl,
      alkoxyalkylcarbonyl, heterocyclylalkylcarbonyl,
      alkylsulfonyl, alkylsulfonylalkylene, amino, aminoalkyl,
      alkylamino, aralkylamino, alkylaminoalkylene,
175
      aminocarbonyl, alkylcarbonylamino,
      alkylcarbonylaminoalkylene, alkylaminoalkylcarbonyl,
      alkylaminoalkylcarbonylamino,
      aminoalkylcarbonylaminoalkyl, alkoxycarbonylamino,
      alkoxyalkylcarbonylamino, alkoxycarbonylaminoalkylene,
180
      alkylimidocarbonyl, amidino, alkylamidino,
      aralkylamidino, quanidino, quanidinoalkylene, and
      alkylsulfonylamino; and
           R^{202} and R^{203} are independently selected from hydrido,
      alkyl, aryl and aralkyl; and
185
           y and z are independently 0, 1, 2, 3, 4, 5 or 6
      wherein y + z is less than or equal to 6; and
           x is 0, 1 or 2; or
           R^2 is -NHCR^{204}R^{205} wherein R^{204} is alkylaminoalkylene,
      and R<sup>205</sup> is aryl; or
190
           R^2 is -C(NR^{206})R^{207} wherein R^{206} is selected from
      hydrogen and hydroxy, and R<sup>207</sup> is selected from alkyl,
      aryl and aralkyl; or
```

R² has the formula:

205

210

215

and

$$\begin{array}{c|c}
 & R^{30} \\
 & C \\
 & C \\
 & R^{31}
\end{array}$$

$$\begin{array}{c|c}
 & H \\
 & C \\
 & R^{32} \\
 & M
\end{array}$$

$$\begin{array}{c|c}
 & R^{32} \\
 & R^{33} \\
 & M
\end{array}$$
(III)

195 wherein:

j is an integer from 0 to 8; and
m is 0 or 1; and

R³⁰ and R³¹ are independently selected from hydrogen, alkyl, aryl, heterocyclyl, aralkyl, heterocyclylalkylene, aminoalkyl, alkylaminoalkyl, aminocarbonylalkyl, alkoxyalkyl, and alkylcarbonyloxyalkyl; and

R³² is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkylcarbonylalkylene, arylcarbonylalkylene, and heterocyclylcarbonylaminoalkylene;

 R^{33} is selected from hydrogen, alkyl, $-C(0)R^{35}$, $-C(0)OR^{35}$, $-C(0)OR^{35}$, $-SO_2R^{36}$, $-C(0)NR^{37}R^{38}$, and $-SO_2NR^{39}R^{40}$, wherein R^{35} , R^{36} , R^{37} , R^{38} , R^{39} and R^{40} are independently selected from hydrocarbon, heterosubstituted hydrocarbon and heterocyclyl; and

 ${\tt R}^{34}$ is selected from hydrogen, alkyl, aminocarbonyl, alkylaminocarbonyl, and arylaminocarbonyl; or

 \mathbb{R}^2 is $-\mathbb{C}\mathbb{R}^{41}\mathbb{R}^{42}$ wherein \mathbb{R}^{41} is aryl, and \mathbb{R}^{42} is hydroxy;

 ${\ensuremath{R^3}}$ is selected from maleimidyl, pyridonyl, thiazolyl, thiazolylalkyl, thiazolylamino,

wherein the R³ maleimidyl, pyridonyl, thiazolyl, thiazolylalkyl, thiazolylamino,

groups may be optionally substituted with one or more
radicals independently selected from halo, keto, alkyl,
aralkyl, aralkenyl, arylheterocyclyl, carboxy,
carboxyalkyl, alkoxy, aryloxy, alkylthio, arylthio,
alkylsulfinyl, arylsulfinyl, alkylsulfonyl, arylsulfonyl,
aralkoxy, heterocyclylalkoxy, amino, alkylamino,

alkenylamino, alkynylamino, cycloalkylamino, cycloalkenylamino, arylamino, haloarylamino, heterocyclylamino, aminocarbonyl, cyano, hydroxy, hydroxyalkyl, alkoxyalkylene, alkenoxyalkylene, aryloxyalkyl, alkoxyalkylamino, alkylaminoalkoxy,

alkoxycarbonyl, aryloxycarbonyl, heterocyclyloxycarbonyl, alkoxycarbonylamino, alkoxyarylamino, alkoxyaralkylamino, aminosulfinyl, aminosulfonyl, alkylsulfonylamino, alkylaminoalkylamino, hydroxyalkylamino, aralkylamino, aryl(hydroxyalkyl)amino, alkylaminoalkylaminoalkylamino,

alkylheterocyclylamino, heterocyclylalkylamino, alkylheterocyclylalkylamino, aralkylheterocyclylamino, heterocyclylheterocyclylalkylamino, alkoxycarbonylheterocyclylamino, nitro, alkylaminocarbonyl, alkylcarbonylamino,

245 haloalkylsulfonyl, aminoalkyl, haloalkyl, alkylcarbonyl, hydrazinyl, alkylhydrazinyl, arylhydrazinyl, and $-NR^{44}R^{45}$ wherein R^{44} is alkylcarbonyl or amino, and R^{45} is alkyl or aralkyl; and

R⁴ is selected from hydrido, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein R⁴ is optionally substituted with one or more radicals independently selected from halo, alkyl, alkenyl, alkynyl, aryl, heterocyclyl, alkylthio, arylthio, alkylthioalkylene, arylthioalkylene, alkylsulfinyl,

270

alkylsulfinylalkylene, arylsulfinylalkylene,
alkylsulfonyl, alkylsulfonylalkylene,
arylsulfonylalkylene, alkoxy, aryloxy, aralkoxy,
aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl,
alkoxycarbonyl, aryloxycarbonyl, haloalkyl, amino, cyano,
nitro, alkylamino, arylamino, alkylaminoalkylene,
arylaminoalkylene, aminoalkylamino, and hydroxy;
provided R³ is not

(IV) (V)

wherein \mathbb{R}^{43} is selected from hydrogen, alkyl, aminoalkyl, alkoxyalkyl, alkenoxyalkyl, and aryloxyalkyl; and

further provided R^2 is selected from aryl, heterocyclyl, unsubstituted cycloalkyl and cycloalkenyl when R^4 is hydrido; and

further provided that R^4 is not methylsulfonylphenyl or aminosulfonylphenyl; and

further provided that R^1 is not methylsulfonylphenyl; or

a pharmaceutically-acceptable salt or tautomer thereof.

130. A compound of Formula IA

wherein

R¹ is selected from hydrido, hydroxy, alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl, heterocyclyl, cycloalkylalkylene, cycloalkenylalkylene, heterocyclylalkylene, haloalkyl, haloalkenyl, haloalkynyl, hydroxyalkyl, hydroxyalkenyl,

- hydroxyalkynyl, aralkyl, aralkenyl, aralkynyl, arylheterocyclyl, carboxy, carboxyalkyl, alkoxyalkyl, alkoxyalkyl, alkenoxyalkyl, alkoxyalkyl, aryloxyalkyl, alkoxyaryl, heterocyclyloxyalkyl, alkoxyalkoxy, mercaptoalkyl, alkylthioalkylene, alkenylthioalkylene,
- alkylthioalkenylene, amino, aminoalkyl, alkylamino, alkenylamino, alkynylamino, arylamino, heterocyclylamino, alkylsulfinyl, alkenylsulfinyl, alkynylsulfinyl, arylsulfinyl, heterocyclylsulfinyl, alkylsulfonyl, alkenylsulfonyl, alkynylsulfonyl, arylsulfonyl,
- heterocyclylsulfonyl, alkylaminoalkylene, alkylsulfonylalkylene, acyl, acyloxycarbonyl, alkoxycarbonylalkylene, aryloxycarbonylalkylene, heterocyclyloxycarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, heterocyclyloxycarbonylarylene,
- alkylcarbonylalkylene, arylcarbonylalkylene,
 heterocyclylcarbonylalkylene, alkylcarbonylarylene,
 arylcarbonylarylene, heterocyclylcarbonylarylene,
 alkylcarbonyloxyalkylene, arylcarbonyloxyalkylene,
 heterocyclylcarbonyloxyalkylene, alkylcarbonyloxyarylene,
- arylcarbonyloxyarylene, and heterocyclylcarbonyloxyarylene; or R¹ has the formula

wherein:

i is an integer from 0 to 9;

R²⁵ is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkylcarbonylalkylene, arylcarbonylalkylene, and heterocyclylcarbonylaminoalkylene; and

R²⁶ is selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkylalkylene, aralkyl, alkoxycarbonylalkylene, and alkylaminoalkyl; and

R²⁷ is selected from alkyl, cycloalkyl, alkynyl,

aryl, heterocyclyl, aralkyl, cycloalkylalkylene, cycloalkenylalkylene, cycloalkylarylene, cycloalkylcycloalkyl, heterocyclylalkylene, alkylarylene, alkylaralkyl, aralkylarylene, alkylheterocyclyl,

alkylheterocyclylalkylene, alkylheterocyclylarylene,

aralkylheterocyclyl, alkoxyalkylene, alkoxyarylene, alkoxyaralkyl, alkoxyheterocyclyl, alkoxyalkoxyarylene, aryloxyarylene, aralkoxyarylene,

alkoxyheterocyclylalkylene, aryloxyalkoxyarylene, alkoxycarbonylalkylene, alkoxycarbonylheterocyclyl,

alkoxycarbonylheterocyclylcarbonylalkylene, aminoalkyl, alkylaminoalkylene, arylaminocarbonylalkylene, alkoxyarylaminocarbonylalkylene, aminocarbonylalkylene, arylaminocarbonylalkylene, alkylaminocarbonylalkylene,

arylcarbonylalkylene, alkoxycarbonylarylene,
aryloxycarbonylarylene, alkylaryloxycarbonylarylene,
arylcarbonylarylene, alkylarylcarbonylarylene,
alkoxycarbonylheterocyclylarylene,
alkoxycarbonylalkoxylarylene,
heterocyclylcarbonylalkylarylene, alkylthioalkylene,

65 cycloalkylthioalkylene, alkylthioarylene,

85

aralkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, arylsulfonylaminoalkylene, alkylsulfonylarylene, alkylaminosulfonylarylene; wherein said alkyl, cycloalkyl, aryl, heterocyclyl, aralkyl,

heterocyclylalkylene, alkylheterocyclylarylene, alkoxyarylene, aryloxyarylene, arylaminocarbonylalkylene, aryloxycarbonylarylene, arylcarbonylarylene, alkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, and alkylsulfonylarylene groups may be optionally substituted with one or more radicals

independently selected from alkyl, halo, haloalkyl, alkoxy, keto, amino, nitro, and cyano; or

R²⁷ is -CHR²⁸R²⁹ wherein R²⁸ is alkoxycarbonyl, and R²⁹ is selected from aralkyl, aralkoxyalkylene, heterocyclylalkylene, alkylheterocyclylalkylene, alkoxycarbonylalkylene, alkylthioalkylene, and aralkylthioalkylene; wherein said aralkyl and heterocylcyl groups may be optionally substituted with one or more radicals independently selected from alkyl and nitro; or

 ${\it R}^{26}$ and ${\it R}^{27}$ together with the nitrogen atom to which they are attached form a heterocycle, wherein said heterocycle is optionally substituted with one or more radicals independently selected from alkyl, aryl,

heterocyclyl, heterocyclylalkylene, alkylheterocyclylalkylene, aryloxyalkylene, alkoxyarylene, alkylaryloxyalkylene, alkylcarbonyl, alkoxycarbonyl, aralkoxycarbonyl, alkylamino and alkoxycarbonylamino; wherein said aryl,

heterocyclylalkylene and aryloxyalkylene radicals may be optionally substituted with one or more radicals independently selected from halogen, alkyl and alkoxy; and

R² is selected from hydrido, halogen, mercapto, 100 alkyl, alkenyl, alkynyl, aryl, heterocyclyl, haloalkyl, hydroxyalkyl, aralkyl, alkylheterocyclyl,

- heterocyclylalkyl, heterocyclylheterocyclyl, heterocyclylalkylheterocyclyl, alkylamino, alkenylamino, alkynylamino, arylamino, aryl(hydroxyalkyl)amino,
- heterocyclylamino, heterocyclylalkylamino, aralkylamino, N-alkyl-N-alkynyl-amino, aminoalkyl, aminoaryl, aminoalkylamino, aminocarbonylalkylene, arylaminoalkylene, alkylaminoalkylene, arylaminoarylene, alkylaminoalkylamino,
- alkylcarbonylaminoalkylene,
 aminoalkylcarbonylaminoalkylene,
 alkylaminoalkylcarbonylamino, cycloalkyl, cycloalkenyl,
 aminoalkylthio, alkylaminocarbonylalkylthio,
 alkylaminoalkylaminocarbonylalkylthio, alkoxy,
- heterocyclyloxy, alkylthio, cyanoalkylthio, alkenylthio, alkynylthio, carboxyalkylthio, arylthio, heterocyclylthio, alkoxycarbonylalkylthio, alkylsulfinyl, alkylsulfonyl, carboxy, carboxyalkyl, alkoxyalkyl, alkoxyalkylthio, carboxycycloalkyl, carboxycycloalkenyl,
- carboxyalkylamino, alkoxycarbonyl, heterocyclylcarbonyl, alkoxycarbonylalkyl, alkoxycarbonylalkylamino, alkoxycarbonylheterocyclyl, alkoxycarbonylheterocyclylcarbonyl, alkoxyalkylamino, alkoxycarbonylaminoalkylene, alkoxycarbonylaminoalkoxy,
- alkoxycarbonylaminoalkylamino, heterocyclylsulfonyl, aralkythio, heterocyclylalkylthio, aminoalkoxy, cyanoalkoxy, carboxyalkoxy, aryloxy, aralkoxy, alkenyloxy, alkynyloxy, and heterocyclylalkyloxy; wherein the aryl, heterocyclyl, heterocyclylalkyl, cycloalkyl and
- cycloalkenyl groups may be optionally substituted with one or more radicals independently selected from halo, keto, amino, alkyl, alkenyl, alkynyl, aryl, heterocyclyl, aralkyl, heterocyclylalkyl, epoxyalkyl, amino(hydroxyalkyl) carboxy, alkoxy, aryloxy, aralkoxy,
- haloalkyl, alkylamino, alkynylamino, alkylaminoalkylamino, heterocyclylalkylamino, alkylcarbonyl, alkoxycarbonyl, alkylsulfonyl,

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arylsulfonyl, and aralkylsulfonyl; or
                R^2 is R^{200}-heterocyclyl-R^{201}, R^{200}-aryl-R^{201}, or R^{200}-
140
        cycloalkyl-R201 wherein:
               R<sup>200</sup> is selected from:
                -(CR^{202}R^{203}), -;
                -C(0)-;
               -C(0) - (CH<sub>2</sub>)<sub>v</sub> - ;
145
               -C(O)-O-(CH<sub>2</sub>)<sub>v</sub>-;
               -(CH_2)_v-C(O)-;
               -O-(CH<sub>2</sub>)<sub>v</sub>-C(O)-;
               -NR^{202}-;
               -NR^{202} - (CH_2)_{v} - ;
150
               -(CH_2)_v - NR^{202} - ;
               -(CH_2)_v-NR^{202}-(CH_2)_z-;
               -(CH_2)_v-C(O)-NR^{202}-(CH_2)_z-;
               -(CH_2)_v-NR^{202}-C(O)-(CH_2)_z-;
               -(CH<sub>2</sub>)<sub>v</sub>-NR<sup>202</sup>-C(O)-NR<sup>203</sup>-(CH<sub>2</sub>)<sub>z</sub>-;
               -S(0)_{x}-(CR^{202}R^{203})_{y}-;
155
               -(CR^{202}R^{203})_{v}-S(O)_{x}-;
               -S(O)_{x}-(CR^{202}R^{203})_{y}-O-;
               -S(O)_{x}-(CR^{202}R^{203})_{y}-C(O)-;
               -O-(CH<sub>2</sub>)<sub>v</sub>-;
160
               - (CH<sub>2</sub>)<sub>v</sub>-O-;
               -S-; and
               -0-;
               or R<sup>200</sup> represents a bond;
               R^{201} represents one or more radicals selected from
165
        the group consisting of hydrido, halogen, hydroxy,
        carboxy, keto, alkyl, hydroxyalkyl, haloalkyl,
        cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl,
        aralkyl, heterocyclylalkylene, alkylcarbonyl,
        hydroxyalkylcarbonyl, cycloalkylcarbonyl, arylcarbonyl,
170
        haloarylcarbonyl, alkoxy, alkoxyalkylene, alkoxyarylene,
        alkoxycarbonyl, carboxyalkylcarbonyl,
        alkoxyalkylcarbonyl, heterocyclylalkylcarbonyl,
        alkylsulfonyl, alkylsulfonylalkylene, amino, aminoalkyl,
```

200

alkylamino, aralkylamino, alkylaminoalkylene,
aminocarbonyl, alkylcarbonylamino,
alkylcarbonylaminoalkylene, alkylaminoalkylcarbonyl,
alkylaminoalkylcarbonylamino,
aminoalkylcarbonylaminoalkyl, alkoxycarbonylamino,
alkoxyalkylcarbonylamino, alkoxycarbonylaminoalkylene,
alkylimidocarbonyl, amidino, alkylamidino,
aralkylamidino, guanidino, guanidinoalkylene, and
alkylsulfonylamino; and

 ${\rm R}^{202}$ and ${\rm R}^{203}$ are independently selected from hydrido, alkyl, aryl and aralkyl; and

y and z are independently 0, 1, 2, 3, 4, 5 or 6 wherein y + z is less than or equal to 6; and

x is 0, 1 or 2; or

 \mbox{R}^2 is $\mbox{-NHCR}^{204}\mbox{R}^{205}$ wherein \mbox{R}^{204} is alkylaminoalkylene, and \mbox{R}^{205} is aryl; or

 \mbox{R}^2 is $-C\,(NR^{206})\,R^{207}$ wherein R^{206} is selected from hydrogen and hydroxy, and R^{207} is selected from alkyl, aryl and aralkyl; or

R² has the formula:

195 wherein:

j is an integer from 0 to 8; and
m is 0 or 1; and

R³⁰ and R³¹ are independently selected from hydrogen, alkyl, aryl, heterocyclyl, aralkyl, heterocyclylalkylene, aminoalkyl, alkylaminoalkyl, aminocarbonylalkyl, alkoxyalkyl, and alkylcarbonyloxyalkyl; and

R³² is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl,

205 alkylcarbonylalkylene, arylcarbonylalkylene, and

heterocyclylcarbonylaminoalkylene;

 $\rm R^{33}$ is selected from hydrogen, alkyl, -C(O)R 35 , -C(O)OR 35 , -SO $_2\rm R^{36}$, -C(O)NR $^{37}\rm R^{38}$, and -SO $_2\rm NR^{39}\rm R^{40}$, wherein

210 R³⁵, R³⁶, R³⁷, R³⁸, R³⁹ and R⁴⁰ are independently selected from hydrocarbon, heterosubstituted hydrocarbon and heterocyclyl; and

 ${\rm R}^{34}$ is selected from hydrogen, alkyl, aminocarbonyl, alkylaminocarbonyl, and arylaminocarbonyl; or

 \mbox{R}^2 is $-\mbox{CR}^{41}\mbox{R}^{42}$ wherein \mbox{R}^{41} is aryl, and \mbox{R}^{42} is hydroxy; and

R³ is selected from pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylakyl, thiazolylamino,

220

225

215

wherein the R³ pyridinyl, pyrimidinyl, quinolinyl, purinyl groups are substituted with one or more radicals independently selected from keto, haloarylamino, alkoxyalkylene, alkenoxyalkylene, aryloxyalkyl, alkoxyalkylamino, alkylaminoalkoxy, alkoxyarylamino, alkylsulfonylamino, aryl(hydroxyalkyl)amino, alkylaminoalkylaminoalkylamino, alkylheterocyclylamino,

230 heterocyclylaterocyclylalkylamino, alkoxycarbonylheterocyclylamino and haloalkylsulfonyl; and

alkylheterocyclylalkylamino,

wherein the \mathbb{R}^3 maleimidyl, pyridonyl, thiazolyl, thiazolylalkyl, thiazolylamino,

265

aralkyl; and

groups may be optionally substituted with one or more radicals independently selected from halo, keto, alkyl, aralkyl, aralkenyl, arylheterocyclyl, carboxy,

carboxyalkyl, alkoxy, aryloxy, alkylthio, arylthio, alkylsulfinyl, arylsulfinyl, alkylsulfonyl, arylsulfonyl, aralkoxy, heterocyclylalkoxy, amino, alkylamino, alkenylamino, alkynylamino, cycloalkylamino, cycloalkenylamino, arylamino, haloarylamino,

heterocyclylamino, aminocarbonyl, cyano, hydroxy, hydroxyalkyl, alkoxyalkylene, alkenoxyalkylene, aryloxyalkyl, alkoxyalkylamino, alkylaminoalkoxy, alkoxycarbonyl, aryloxycarbonyl, heterocyclyloxycarbonyl, alkoxycarbonylamino, alkoxyarylamino, alkoxyaralkylamino,

aminosulfinyl, aminosulfonyl, alkylsulfonylamino, alkylaminoalkylamino, hydroxyalkylamino, aralkylamino, aryl(hydroxyalkyl)amino, alkylaminoalkylaminoalkylamino, alkylheterocyclylamino, heterocyclylalkylamino, alkylheterocyclylalkylamino, aralkylheterocyclylalkylamino,

heterocyclylheterocyclylalkylamino,
alkoxycarbonylheterocyclylamino, nitro,
alkylaminocarbonyl, alkylcarbonylamino,
haloalkylsulfonyl, aminoalkyl, haloalkyl, alkylcarbonyl,
hydrazinyl, alkylhydrazinyl, arylhydrazinyl, and -NR⁴⁴R⁴⁵
wherein R⁴⁴ is alkylcarbonyl or amino, and R⁴⁵ is alkyl or

 R^4 is selected from hydrido, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein R^4 is optionally substituted with one or more radicals independently selected from halo, alkyl, alkenyl, alkynyl, aryl, heterocyclyl, alkylthio, arylthio,

alkylthioalkylene, arylthioalkylene, alkylsulfinyl,

290

275

alkylsulfinylalkylene, arylsulfinylalkylene, alkylsulfonyl, alkylsulfonylalkylene,

arylsulfonylalkylene, alkoxy, aryloxy, aralkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, alkoxycarbonyl, aryloxycarbonyl, haloalkyl, amino, cyano, nitro, alkylamino, arylamino, alkylaminoalkylene, arylaminoalkylene, aminoalkylamino, and hydroxy;

provided R^3 is not 2-pyridinyl when R^4 is a phenyl ring containing a 2-hydroxy substituent and when R^1 is hydrido; and

provided R3 is not

280 (IV) (V)

wherein \mathbb{R}^{43} is selected from hydrogen, alkyl, aminoalkyl, alkoxyalkyl, alkenoxyalkyl, and aryloxyalkyl; and

further provided R^2 is selected from aryl, heterocyclyl, unsubstituted cycloalkyl and cycloalkenyl when R^4 is hydrido; and

further provided that ${\bf R}^4$ is not methylsulfonylphenyl or aminosulfonylphenyl; and

further provided that R1 is not methylsulfonylphenyl; or

a pharmaceutically-acceptable salt or tautomer thereof.

131. A compound of Formula IA

wherein

R¹ is selected from hydroxy and alkoxyaryl; and
R² is selected from hydrido, halogen, mercapto,
alkyl, alkenyl, alkynyl, aryl, heterocyclyl, haloalkyl,
hydroxyalkyl, aralkyl, alkylheterocyclyl,
heterocyclylalkyl, heterocyclylheterocyclyl,

- heterocyclylalkylheterocyclyl, alkylamino, alkenylamino, alkynylamino, arylamino, aryl(hydroxyalkyl)amino, heterocyclylamino, heterocyclylalkylamino, aralkylamino, N-alkyl-N-alkynyl-amino, aminoalkyl, aminoaryl, aminoalkylamino, aminocarbonylalkylene,
- arylaminoalkylene, alkylaminoalkylene, arylaminoarylene, alkylaminoarylene, alkylaminoalkylamino, alkylcarbonylaminoalkylene, aminoalkylcarbonylaminoalkylene, alkylaminoalkylcarbonylamino, cycloalkyl, cycloalkenyl,
- aminoalkylthio, alkylaminocarbonylalkylthio, alkoxy, alkylaminoalkylaminocarbonylalkylthio, alkoxy, heterocyclyloxy, alkylthio, cyanoalkylthio, alkenylthio, alkynylthio, carboxyalkylthio, arylthio, heterocyclylthio, alkoxycarbonylalkylthio, alkylsulfinyl,
- alkylsulfonyl, carboxy, carboxyalkyl, alkoxyalkyl, alkoxyalkylthio, carboxycycloalkyl, carboxycycloalkenyl, carboxyalkylamino, alkoxycarbonyl, heterocyclylcarbonyl, alkoxycarbonylalkyl, alkoxycarbonylalkylamino, alkoxycarbonylheterocyclyl,
- alkoxycarbonylheterocyclylcarbonyl, alkoxyalkylamino, alkoxycarbonylaminoalkylene, alkoxycarbonylaminoalkoxy, alkoxycarbonylaminoalkylamino, heterocyclylsulfonyl,

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aralkythio, heterocyclylalkylthio, aminoalkoxy,
      cyanoalkoxy, carboxyalkoxy, aryloxy, aralkoxy,
35
      alkenyloxy, alkynyloxy, and heterocyclylalkyloxy; wherein
      the aryl, heterocyclyl, heterocyclylalkyl, cycloalkyl and
      cycloalkenyl groups may be optionally substituted with
      one or more radicals independently selected from halo,
      keto, amino, alkyl, alkenyl, alkynyl, aryl, heterocyclyl,
      aralkyl, heterocyclylalkyl, epoxyalkyl,
40
      amino(hydroxyalkyl) carboxy, alkoxy, aryloxy, aralkoxy,
      haloalkyl, alkylamino, alkynylamino,
      alkylaminoalkylamino, heterocyclylalkylamino,
      alkylcarbonyl, alkoxycarbonyl, alkylsulfonyl,
      arylsulfonyl, and aralkylsulfonyl; or
45
             R^2 is R^{200}-heterocyclyl-R^{201}, R^{200}-aryl-R^{201}, or R^{200}-
      cycloalkyl-R201 wherein:
            R^{200} is selected from:
             -(CR^{202}R^{203}), -;
50
             -C(O)-;
             -C(0) - (CH<sub>2</sub>)<sub>v</sub> - ;
             -C(O)-O-(CH<sub>2</sub>)<sub>v</sub>-;
             -(CH_2)_v-C(O)-;
             -O-(CH<sub>2</sub>),-C(O)-;
55
             -NR^{202}-;
             -NR^{202} - (CH_2)_{v} - ;
             -(CH_2)_v-NR^{202}-;
             -(CH_2)_v - NR^{202} - (CH_2)_z - ;
             -(CH_2)_v - C(O) - NR^{202} - (CH_2)_z - ;
             -(CH_2)_v - NR^{202} - C(O) - (CH_2)_z - ;
60
             -(CH_2)_y-NR^{202}-C(O)-NR^{203}-(CH_2)_z-;
             -S(0)_{x}-(CR^{202}R^{203})_{y}-;
             - (CR^{202}R^{203})_y-S(O)_x-;
             -S(O)_{x}-(CR^{202}R^{203})_{y}-O-;
             -S(O)_{x}-(CR^{202}R^{203})_{y}-C(O)-;
65
             -O-(CH<sub>2</sub>)<sub>v</sub>-;
             - (CH<sub>2</sub>)<sub>v</sub>-O-;
             -S-; and
```

95

-0-;

70 or R²⁰⁰ represents a bond;

R²⁰¹ represents one or more radicals selected from the group consisting of hydrido, halogen, hydroxy, carboxy, keto, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl,

aralkyl, heterocyclylalkylene, alkylcarbonyl, hydroxyalkylcarbonyl, cycloalkylcarbonyl, arylcarbonyl, haloarylcarbonyl, alkoxy, alkoxyalkylene, alkoxyarylene, alkoxycarbonyl, carboxyalkylcarbonyl, alkoxyalkylcarbonyl, heterocyclylalkylcarbonyl,

alkylsulfonyl, alkylsulfonylalkylene, amino, aminoalkyl, alkylamino, aralkylamino, alkylaminoalkylene, aminocarbonyl, alkylcarbonylamino, alkylcarbonylaminoalkylene, alkylaminoalkylcarbonyl, alkylaminoalkylcarbonylamino,

aminoalkylcarbonylaminoalkyl, alkoxycarbonylamino, alkoxyalkylcarbonylamino, alkoxycarbonylaminoalkylene, alkylimidocarbonyl, amidino, alkylamidino, aralkylamidino, guanidino, guanidinoalkylene, and alkylsulfonylamino; and

 ${\rm R}^{202}$ and ${\rm R}^{203}$ are independently selected from hydrido, alkyl, aryl and aralkyl; and

y and z are independently 0, 1, 2, 3, 4, 5 or 6 wherein y + z is less than or equal to 6; and

x is 0, 1 or 2; or

 \mbox{R}^2 is $-\mbox{NHCR}^{204}\mbox{R}^{205}$ wherein \mbox{R}^{204} is alkylaminoalkylene, and \mbox{R}^{205} is aryl; or

 $\rm R^2$ is -C(NR^{206})\,R^{207} wherein $\rm R^{206}$ is selected from hydrogen and hydroxy, and $\rm R^{207}$ is selected from alkyl, aryl and aralkyl; or

100 R^2 has the formula:

$$-\frac{1}{C} \frac{(CH_{2})_{j}}{(CH_{2})_{j}} - \left[\begin{array}{c} H \\ C \\ H \\ R^{34} \end{array}\right]_{m}^{R^{32}}$$
(III)

120

wherein:

j is an integer from 0 to 8; and
m is 0 or 1; and

105 R³⁰ and R³¹ are independently selected from hydrogen, alkyl, aryl, heterocyclyl, aralkyl, heterocyclylalkylene, aminoalkyl, alkylaminoalkyl, aminocarbonylalkyl, alkoxyalkyl, and alkylcarbonyloxyalkyl; and

R³² is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkylcarbonylalkylene, arylcarbonylalkylene, and heterocyclylcarbonylaminoalkylene;

 $\rm R^{33}$ is selected from hydrogen, alkyl, -C(0) $\rm R^{35}$, -C(0) OR 35 , -SO $_2\rm R^{36}$, -C(0) NR $^{37}\rm R^{38}$, and -SO $_2\rm NR^{39}\rm R^{40}$, wherein

 R^{35} , R^{36} , R^{37} , R^{38} , R^{39} and R^{40} are independently selected from hydrocarbon, heterosubstituted hydrocarbon and heterocyclyl; and

 ${\bf R}^{34}$ is selected from hydrogen, alkyl, aminocarbonyl, alkylaminocarbonyl, and arylaminocarbonyl; or

 \mbox{R}^2 is $-\mbox{CR}^{41}\mbox{R}^{42}$ wherein \mbox{R}^{41} is aryl, and \mbox{R}^{42} is hydroxy; and

R³ is selected from pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylalkyl, thiazolylamino,

wherein the R³ pyridinyl, pyrimidinyl, quinolinyl, 130 purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylalkyl, thiazolylamino,

groups may be optionally substituted with one or more
radicals independently selected from halo, keto, alkyl,
aralkyl, aralkenyl, arylheterocyclyl, carboxy,
carboxyalkyl, alkoxy, aryloxy, alkylthio, arylthio,
alkylsulfinyl, arylsulfinyl, alkylsulfonyl, arylsulfonyl,
aralkoxy, heterocyclylalkoxy, amino, alkylamino,

alkenylamino, alkynylamino, cycloalkylamino, cycloalkenylamino, arylamino, haloarylamino, heterocyclylamino, aminocarbonyl, cyano, hydroxy, hydroxyalkyl, alkoxyalkylene, alkenoxyalkylene, aryloxyalkyl, alkoxyalkylamino, alkylaminoalkoxy,

alkoxycarbonyl, aryloxycarbonyl, heterocyclyloxycarbonyl, alkoxycarbonylamino, alkoxyarylamino, alkoxyaralkylamino, aminosulfinyl, aminosulfonyl, alkylsulfonylamino, alkylaminoalkylamino, hydroxyalkylamino, aralkylamino, aryl(hydroxyalkyl)amino, alkylaminoalkylaminoalkylamino,

alkylheterocyclylamino, heterocyclylalkylamino, alkylheterocyclylalkylamino, aralkylheterocyclylamino, heterocyclylheterocyclylalkylamino, alkoxycarbonylheterocyclylamino, nitro, alkylaminocarbonyl, alkylcarbonylamino,

haloalkylsulfonyl, aminoalkyl, haloalkyl, alkylcarbonyl, hydrazinyl, alkylhydrazinyl, arylhydrazinyl, and $-NR^{44}R^{45}$ wherein R^{44} is alkylcarbonyl or amino, and R^{45} is alkyl or aralkyl; and

R⁴ is selected from hydrido, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein R⁴ is optionally substituted with one or more radicals independently selected from halo, alkyl, alkenyl, alkynyl, aryl, heterocyclyl, alkylthio, arylthio, alkylthioalkylene, arylthioalkylene, alkylsulfinyl,

5

5

alkylsulfinylalkylene, arylsulfinylalkylene, alkylsulfonyl, alkylsulfonylalkylene, arylsulfonylalkylene, alkoxy, aryloxy, aralkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, alkoxycarbonyl, aryloxycarbonyl, haloalkyl, amino, cyano,

nitro, alkylamino, arylamino, alkylaminoalkylene, arylaminoalkylene, aminoalkylamino, and hydroxy;

provided R^3 is not 2-pyridinyl when R^4 is a phenyl ring containing a 2-hydroxy substituent and when R^1 is hydrido; and

further provided R^2 is selected from aryl, heterocyclyl, unsubstituted cycloalkyl and cycloalkenyl when R^4 is hydrido; and

further provided that R^4 is not methylsulfonylphenyl or aminosulfonylphenyl; or

a pharmaceutically-acceptable salt or tautomer thereof.

- 132. A pharmaceutical composition comprising a therapeutically-effective amount of a compound, said compound selected from the compounds of any one of Claims 1, 39, 71, 82 and 94, or a pharmaceutically acceptable salt thereof.
- 133. A method of treating a TNF mediated disorder, said method comprising treating the subject having or susceptible to such disorder with a therapeutically-effective amount of a compound, said compound selected from the compounds of any one of Claims 1, 39, 71, 82 and 94, or a pharmaceutically acceptable salt thereof.
- 134. A method of treating a p38 kinase mediated disorder, said method comprising treating the subject having or susceptible to such disorder with a therapeutically-effective amount of a compound, said compound selected from the compounds of any one of Claims

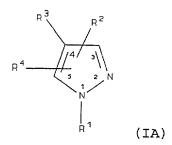
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5

5

- 5 1, 39, 71, 82 and 94, or a pharmaceutically acceptable salt thereof.
 - 135. The method of Claim 134 wherein the p38 kinase mediated disorder is selected from the group of disorders consisting of bone resorption, graft vs. host reaction, atherosclerosis, arthritis, osteoarthritis, rheumatoid arthritis, gout, psoriasis, topical inflammatory disease state, adult respiratory distress syndrome, asthma, chronic pulmonary inflammatory disease, cardiac reperfusion injury, renal reperfusion injury, thrombus, glomerulonephritis, Crohn's disease, ulcerative colitis, inflammatory bowel disease and cachexia.
 - 136. The method of Claim 134 wherein the p38 kinase mediated disorder is inflammation.
 - 137. The method of Claim 134 wherein the p38 kinase mediated disorder is arthritis.
 - 138. The method of Claim 134 wherein the p38 kinase mediated disorder is asthma.
 - 139. A method of treating inflammation, said method comprising treating the subject having or susceptible to inflammation with a therapeutically-effective amount of a compound, said compound selected from the compounds of any one of Claims 1, 39, 71, 82 and 94, or a pharmaceutically acceptable salt thereof.
 - 140. A method of treating arthritis, said method comprising treating the subject having or susceptible to arthritis with a therapeutically-effective amount of a compound, said compound selected from the compounds of any one of Claims 1, 39, 71, 82 and 94, or a pharmaceutically acceptable salt thereof.

141. A method of preparing pyrazoles of Formula IA



wherein

R¹ is selected from hydrido, hydroxy, alkyl,
5 cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl, heterocyclyl, cycloalkylalkylene, cycloalkenylalkylene, heterocyclylalkylene, haloalkyl, haloalkenyl, haloalkynyl, hydroxyalkyl, hydroxyalkenyl, hydroxyalkynyl, aralkyl, aralkenyl, aralkynyl,

- arylheterocyclyl, carboxy, carboxyalkyl, alkoxyalkyl, alkenoxyalkyl, alkynoxyalkyl, aryloxyalkyl, alkoxyaryl, heterocyclyloxyalkyl, alkoxyalkoxy, mercaptoalkyl, alkylthioalkylene, alkenylthioalkylene, alkylthioalkylene, amino, aminoalkyl, alkylamino,
- alkenylamino, alkynylamino, arylamino, heterocyclylamino, alkylsulfinyl, alkenylsulfinyl, alkynylsulfinyl, arylsulfinyl, heterocyclylsulfinyl, alkylsulfonyl, alkenylsulfonyl, alkynylsulfonyl, arylsulfonyl, heterocyclylsulfonyl, alkylaminoalkylene,
- alkylsulfonylalkylene, acyl, acyloxycarbonyl, alkoxycarbonylalkylene, aryloxycarbonylalkylene, heterocyclyloxycarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, heterocyclyloxycarbonylarylene, alkylcarbonylalkylene, arylcarbonylalkylene,
- heterocyclylcarbonylalkylene, alkylcarbonylarylene, arylcarbonylarylene, heterocyclylcarbonylarylene, alkylcarbonyloxyalkylene, arylcarbonyloxyalkylene, heterocyclylcarbonyloxyalkylene, alkylcarbonyloxyarylene, arylcarbonyloxyarylene, and
- 30 heterocyclylcarbonyloxyarylene; or

45

R1 has the formula

$$-\frac{C}{C} - (CH_2)_1 - \frac{0}{C} + \frac{R^{26}}{R^{27}}$$
(II)

wherein:

i is an integer from 0 to 9;

R²⁵ is selected from hydrogen, alkyl, aralkyl, heterocyclylalkyl, alkoxyalkylene, aryloxyalkylene, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkylcarbonylalkylene, arylcarbonylalkylene, and heterocyclylcarbonylaminoalkylene; and

R²⁶ is selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkylalkylene, aralkyl, alkoxycarbonylalkylene, and alkylaminoalkyl; and

R²⁷ is selected from alkyl, cycloalkyl, alkynyl, aryl, heterocyclyl, aralkyl, cycloalkylalkylene, cycloalkenylalkylene, cycloalkylarylene, cycloalkylcycloalkyl, heterocyclylalkylene, alkylarylene, alkylaralkyl, aralkylarylene, alkylheterocyclyl, alkylheterocyclylalkylene, alkylheterocyclylarylene, aralkylheterocyclyl, alkoxyalkylene, alkoxyarylene, alkoxyaralkyl, alkoxyheterocyclyl, alkoxyarylene,

- alkoxyaralkyl, alkoxyheterocyclyl, alkoxyalkoxyarylene, aryloxyarylene, aralkoxyarylene, alkoxyheterocyclylalkylene, aryloxyalkoxyarylene, alkoxycarbonylalkylene, alkoxycarbonylheterocyclyl, alkoxycarbonylheterocyclylcarbonylalkylene, aminoalkyl,
- alkylaminoalkylene, arylaminocarbonylalkylene, alkoxyarylaminocarbonylalkylene, aminocarbonylalkylene, arylaminocarbonylalkylene, alkylaminocarbonylalkylene, arylcarbonylalkylene, alkoxycarbonylarylene, aryloxycarbonylarylene, alkylaryloxycarbonylarylene,
- arylcarbonylarylene, alkylarylcarbonylarylene, alkoxycarbonylheterocyclylarylene, alkoxycarbonylalkoxylarylene, heterocyclylcarbonylalkylarylene, alkylthioalkylene,

85

and

cycloalkylthioalkylene, alkylthioarylene, 65 aralkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, arylsulfonylaminoalkylene, alkylsulfonylarylene, and alkylaminosulfonylarylene; wherein said alkyl, cycloalkyl, aryl, heterocyclyl, aralkyl, heterocyclylalkylene, alkylheterocyclylarylene, 70 alkoxyarylene, aryloxyarylene, arylaminocarbonylalkylene, aryloxycarbonylarylene, arylcarbonylarylene, alkylthioarylene, heterocyclylthioarylene, arylthioalklylarylene, and alkylsulfonylarylene groups may be optionally substituted with one or more radicals 75 independently selected from alkyl, halo, haloalkyl, alkoxy, keto, amino, nitro, and cyano; or

R²⁷ is -CHR²⁸R²⁹ wherein R²⁸ is alkoxycarbonyl, and R²⁹ is selected from aralkyl, aralkoxyalkylene, heterocyclylalkylene, alkylheterocyclylalkylene, alkoxycarbonylalkylene, alkylthioalkylene, and aralkylthioalkylene; wherein said aralkyl and heterocylcyl groups may be optionally substituted with one or more radicals independently selected from alkyl and nitro; or

R²⁶ and R²⁷ together with the nitrogen atom to which they are attached form a heterocycle, wherein said heterocycle is optionally substituted with one or more radicals independently selected from alkyl, aryl, heterocyclyl, heterocyclylalkylene,

alkylheterocyclylalkylene, aryloxyalkylene, alkylcarbonyl, alkoxyarylene, alkylaryloxyalkylene, alkylcarbonyl, alkoxycarbonyl, aralkoxycarbonyl, alkylamino and alkoxycarbonylamino; wherein said aryl, heterocyclylalkylene and aryloxyalkylene radicals may be optionally substituted with one or more radicals independently selected from halogen, alkyl and alkoxy;

R² is selected from mercapto, aryl(hydroxyalkyl)amino, N-alkyl-N-alkynyl-amino,

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100
       aminocarbonylalkylene, alkylcarbonylaminoalkylene,
       aminoalkylcarbonylaminoalkylene,
       alkylaminoalkylcarbonylamino, aminoalkylthio,
       alkylaminocarbonylalkylthio,
       alkylaminoalkylaminocarbonylalkylthio, cyanoalkylthio,
105
       alkenylthio, alkynylthio, carboxyalkylthio,
       alkoxycarbonylalkylthio, alkylsulfinyl, alkylsulfonyl,
       alkoxyalkyl, alkoxyalkylthio, alkoxycarbonylalkylamino,
       alkoxycarbonylaminoalkylene, alkoxycarbonylaminoalkoxy,
       aralkythio, heterocyclylalkylthio, aminoalkoxy,
110
       cyanoalkoxy, carboxyalkoxy, aryloxy, aralkoxy,
       alkenyloxy, alkynyloxy, and heterocyclylalkyloxy; or
              R^2 is R^{200}-heterocyclyl-R^{201}, R^{200}-aryl-R^{201}, or R^{200}-
       cycloalkyl-R201 wherein:
              R<sup>200</sup> is selected from:
              -(CR^{202}R^{203})_{v}-;
115
              -C(0)-;
              -C(O) - (CH_2)_v - ;
              -C(0)-O-(CH<sub>2</sub>)<sub>v</sub>-;
              -(CH_2)_v-C(0)-;
120
              -O-(CH_2)_v-C(O)-;
              -NR^{202}-;
              -NR^{202} - (CH_2)_{V} - ;
              -(CH_2)_v - NR^{202} - ;
              -(CH_2)_v-NR^{202}-(CH_2)_z-;
              -(CH_2)_v-C(O)-NR^{202}-(CH_2)_z-;
125
              -(CH_2)_v-NR^{202}-C(O)-(CH_2)_z-;
              -(CH_2)_v-NR^{202}-C(O)-NR^{203}-(CH_2)_z-;
              -S(0)_{x}-(CR^{202}R^{203})_{y}-;
              -(CR^{202}R^{203})_{v}-S(0)_{x}-;
              -S(0)_{x}-(CR^{202}R^{203})_{y}-0-;
130
              -S(0) - (CR^{202}R^{203}) - C(0) - ;
              -O-(CH<sub>2</sub>),-;
              - (CH<sub>2</sub>)<sub>v</sub>-O-;
              -S-; and
135
              -0-;
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160

or R²⁰⁰ represents a bond;

R²⁰¹ represents one or more radicals selected from the group consisting of hydroxy, hydroxyalkyl, cycloalkyl, hydroxyalkylcarbonyl, cycloalkylcarbonyl,

- arylcarbonyl, haloarylcarbonyl, alkoxyalkylene, alkoxyarylene, carboxyalkylcarbonyl, alkoxyalkylcarbonyl, heterocyclylalkylcarbonyl, alkylsulfonylalkylene, aminoalkyl, aralkylamino, alkylaminoalkylene, aminocarbonyl, alkylcarbonylamino,
- alkylcarbonylaminoalkylene, alkylaminoalkylcarbonyl, alkylaminoalkylcarbonylamino, aminoalkylcarbonylaminoalkyl, alkoxycarbonylamino, alkoxyalkylcarbonylamino, alkoxycarbonylaminoalkylene, alkylimidocarbonyl, amidino, alkylamidino,
- aralkylamidino, guanidino, guanidinoalkylene, and alkylsulfonylamino; and

 ${\rm R}^{202}$ and ${\rm R}^{203}$ are independently selected from hydrido, alkyl, aryl and aralkyl; and

y and z are independently 0, 1, 2, 3, 4, 5 or 6 wherein y + z is less than or equal to 6; and

x is 0, 1 or 2; or

 \mbox{R}^2 is $-\mbox{NHCR}^{204}\mbox{R}^{205}$ wherein \mbox{R}^{204} is alkylaminoalkylene, and \mbox{R}^{205} is aryl; or

 R^2 is $-C(NR^{206})R^{207}$ wherein R^{206} is selected from hydrogen and hydroxy, and R^{207} is selected from alkyl, aryl and aralkyl; and

R³ is selected from pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl, thiazolylakyl, thiazolylamino,

165

wherein the R³ pyridinyl, pyrimidinyl, quinolinyl, purinyl, maleimidyl, pyridonyl, thiazolyl,

thiazolylalkyl, thiazolylamino,

170

175

200

groups may be optionally substituted with one or more radicals independently selected from halo, keto, alkyl, aralkyl, aralkenyl, arylheterocyclyl, carboxy, carboxyalkyl, alkoxy, aryloxy, alkylthio, arylthio, alkylsulfinyl, arylsulfinyl, alkylsulfonyl, arylsulfonyl, aralkoxy, heterocyclylalkoxy, amino alkylamino

aralkoxy, heterocyclylalkoxy, amino, alkylamino, alkenylamino, alkynylamino, cycloalkylamino, cycloalkenylamino, arylamino, haloarylamino,

heterocyclylamino, aminocarbonyl, cyano, hydroxy, hydroxyalkyl, alkoxyalkylene, alkenoxyalkylene, aryloxyalkyl, alkoxyalkylamino, alkylaminoalkoxy, alkoxycarbonyl, aryloxycarbonyl, heterocyclyloxycarbonyl, alkoxycarbonylamino, alkoxyarylamino, alkoxyaralkylamino,

aminosulfinyl, aminosulfonyl, alkylsulfonylamino, alkylaminoalkylamino, hydroxyalkylamino, aralkylamino, aryl(hydroxyalkyl)amino, alkylaminoalkylaminoalkylamino, alkylheterocyclylamino, heterocyclylalkylamino, alkylheterocyclylalkylamino, aralkylheterocyclylalkylamino,

heterocyclylheterocyclylalkylamino,
alkoxycarbonylheterocyclylamino, nitro,
alkylaminocarbonyl, alkylcarbonylamino,
haloalkylsulfonyl, aminoalkyl, haloalkyl, alkylcarbonyl,
hydrazinyl, alkylhydrazinyl, arylhydrazinyl, and -NR⁴⁴R⁴⁵
wherein R⁴⁴ is alkylcarbonyl or amino, and R⁴⁵ is alkyl or
aralkyl; and

 R^4 is selected from hydrido, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, and heterocyclyl, wherein R^4 is optionally substituted with one or more radicals independently selected from halo, alkyl, alkenyl, alkynyl, aryl, heterocyclyl, alkylthio, arylthio,

alkylthioalkylene, arylthioalkylene, alkylsulfinyl, alkylsulfinylalkylene, arylsulfinylalkylene, alkylsulfonyl, alkylsulfonylalkylene,

arylsulfonylalkylene, alkoxy, aryloxy, aralkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, alkoxycarbonyl, aryloxycarbonyl, haloalkyl, amino, cyano, nitro, alkylamino, arylamino, alkylaminoalkylene, arylaminoalkylene, aminoalkylamino, and hydroxy; or

a pharmaceutically-acceptable salt or tautomer thereof,

said method comprising the steps of treating a substituted ketone with an acyl hydrazide to give the pyrazole.

- 142. The process of Claim 141 wherein the process is carried out in an acidic solvent.
- 143. The process of Claim 141 wherein the acidic solvent is acetic acid.
- 144. The process of Claim 141 wherein the acidic solvent is an organic solvent containing an acid.

145. The compound:

or a tautomer or pharmaceutically acceptable salt thereof.

146. A compound of Claim 71 that is:

or a tautomer or pharmaceutically acceptable salt thereof.

147. A compound of Claim 39 that is:

10

or a tautomer or pharmaceutically acceptable salt thereof.

148. The compound:

149. A compound of Claim 1 that is:

$$HO \longrightarrow OH$$

20

or a tautomer or pharmaceutically acceptable salt thereof.

25

150. The compound:

30 151. A compound of Claim 1 that is:

or a tautomer or pharmaceutically acceptable salt thereof.

35 152. A compound of Claim 1 that is:

or a tautomer or pharmaceutically acceptable salt thereof.

153. A compound of Claim 1 that is:

45

154. A compound of Claim 39 that is:

or a tautomer or pharmaceutically acceptable salt thereof.

50

155. A compound of Claim 1 that is:

or a tautomer or pharmaceutically acceptable salt thereof.

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156. A compound of Claim 82 that is:

60

157. A compound of Claim 42 that is:

or a tautomer or pharmaceutically acceptable salt thereof.

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158. A compound of Claim 71 that is:

159. A compound of Claim 71 that is:

or a tautomer or pharmaceutically acceptable salt thereof.

160. A compound of Claim 70 wherein $R^{\rm 404a}$ is metachloro or para-chloro.

70

75